ISSN-0974-9349 (Print) • ISSN-0974-9357 (Electronic)

Volume 8 | Number 3 | July-September 2016

International Journal of Nursing Education

www.ijone.org

International Journal of Nursing Education

International Journal of Nursing Education

International Journal of Nursing Education is an international peer reviewed journal. It publishes articles related to nursing and midwifery. The purpose of the journal is to bring advancement in nursing education. The journal publishes articles related to specialities of nursing education, care and practice. The journal has been assigned international standard serial numbers 0974-9349 (print) and 0974-9357 (electronic). The journal is covered by Index Copernicus, Poland and is included in many international databases. We have pleasure to inform you that IJONE is a double blind peer reviewed indexed international journal and is now covered by EMBASE (Scopus), Indian citation index, GOOGLE SCHOLAR, INDEX COPERNICUS (POLAND), EBSCOHOST (USA), and many other international databases.

Print-ISSN: 0974-9349, Electronic - ISSN: 0974-9357,
Frequency: Quarterly (Four issues in a year)

www.ijone.org

Editor

Dr. R.K. Sharma
Institute of Medico-legal Publications
4th Floor, Statesman House Building, Barakhamba Road,
Connaught Place, New Delhi-110 001

Printed, published and owned by

Dr. R.K. Sharma
Institute of Medico-legal Publications
4th Floor, Statesman House Building, Barakhamba Road,
Connaught Place, New Delhi-110 001

Published at

Institute of Medico-legal Publications
4th Floor, Statesman House Building, Barakhamba Road,
Connaught Place, New Delhi-110 001

International Journal of Nursing Education

www.ijone.org

CONTENTS

Volume 8, Number 3 July-September 2016

DOI Number: 10.5958/0974-9357.2016.00082.9

Effects of a Behavioral Intervention on Self-Efficacy, Self- Care Behavior and HbA1c Values among Patients with Type 2 Diabetes Mellitus

Manjula GB[1], Jayarani Premkumar[2]

[1]Professor, College of Nursing, Dayananda Sagar University, Bangalore, [2]Former Professor and Nursing Superintendent, Christian Medical College, Vellore

ABSTRACT

Introduction: Diabetes is a chronic disease with severe complications and high mortality rate. Much of the complications are related to poor glycemic control. Making their own decisions for improving blood sugar levels and performing related self chosen actions and maintaining its long term performance is the key element in diabetes self care management. However, sustenance of these activities seldom happens. Addressing this issue, several behavioral support programmes have been tried and tested.

Objective: To evaluate the effectiveness of a behavioural intervention on self efficacy, self care behavior and HbA1c values among patients with type 2 diabetes mellitus.

Methodology: A True experimental study with pretest-posttest control group design was done on a sample of 300 patients attending diabetes clinic of a tertiary care centre in Kerala, South India. Subjects were randomly allotted to intervention and control group after obtaining ethical clearance and consent. Self efficacy was measured by Diabetes Self Efficacy Scale and self care behaviour was assessed by Summary of Diabetes Self Care Activities (Revised version). The assessments were carried out at baseline, at 3 months and at 6 months. Subjects in experimental group received both routine hospital treatment and behavioral intervention. Control group received routine hospital treatment which included drug therapy and nutritional counseling. Data collected were analyzed using SPSS version 16 by means of appropriate descriptive and inferential statistics.

Findings: It was found that the mean difference in overall self efficacy and self care behaviour between third month and baseline, sixth month and baseline, between sixth month and third month were significantly higher ($p<0.001$) in experimental group than in control group. HbA1c values were also significantly reduced. It was concluded that adding a behavioural intervention along with routine diabetic care enhances patients' confidence in self management of the disease which in turn improves their self care behavior.

Keywords: *Behavioral intervention, self- efficacy, self- care behavior, HbA1c, Type 2 diabetes mellitus.*

BACKGROUND OF STUDY

Diabetes is a chronic disease, which occurs when the pancreas does not produce enough insulin, or when the body cannot effectively use the insulin it produces. International Diabetes Federation's figures indicate that the number of people living with diabetes across the globe is expected to rise from 366 million in 2011 to 552 million by 2030 if no urgent action is taken[1]. Close to one-fifth of all adults with diabetes in the world live in the South-East Asia Region. Estimates in the year 2011 indicate that of 71.4 million people with diabetes in South East Asia, 61.3

Corresponding author:
Manjula GB,
Professor, College of Nursing, Dayananda Sagar University, Bangalore,
E-mail: manjoo_gus@yahoo.com

million are in India. The region has the second highest number of deaths attributable to diabetes of any of the seven IDF regions with 1.16 million deaths in 2011. India is the largest contributor to regional mortality with 983,000 deaths attributable to diabetes[2]. A national survey of diabetes conducted in six major cities in India in the year 2000 has shown that the prevalence of diabetes in urban Indian adults was 12.1%[3]. In Kerala "diabetes capital of India", the age-standardized prevalence (for Kerala's age structure) works out to 14.9 percent in men and 13.2 percent in women.

The primary goal in the management of diabetes mellitus is the attainment of near-normal glycaemia. In India, more than half of patients have poor glycaemic control and have vascular complications. Therefore, the line of management should be one that prevents development and progression of complications. In this regard, IDF states that at the individual level diabetes self-management education that integrates the clinical, behavioral and psychosocial aspects of diabetes self-management should be available and sustained.

Making their own decisions for improving blood sugar levels and performing related self chosen actions and maintaining its long term performance is the key element in diabetes self care management. However, sustenance of these activities seldom happens. Addressing this issue, several behavioral support programmes have been tried and tested. Bandura's self efficacy theory puts forth behavioral methods to increase a person's self efficacy. Self-efficacy is a belief in one's ability to perform a task that will lead to the desired outcome. Utilizing self-efficacy counseling skills is an effective way to enhance patients' compliance with self-care activities. Hence this study was undertaken to evaluate the effectiveness of a behavioural intervention on self efficacy, self care behavior and HbA1c values among patients with type 2 diabetes mellitus and to associate selected socio demographic and morbidity variables with effect of intervention on self efficacy, self care behavior and HbA1c values.

MATERIAL & METHOD

This was a true experimental study with a pretest-posttest control group design and longitudinal measurements of outcomes. After obtaining ethical clearance from the institution review board, data was collected from 300 out-patients attending a diabetic clinic of a tertiary hospital in Kerala. An informed written consent was obtained. Data was collected by interview method using standardized tools whose validity and reliability was ensured. Self efficacy was measured by Diabetes Self Efficacy Scale developed by researcher and self care behaviour was assessed by Summary of Diabetes Self Care Activities (Revised version) developed by DJ. Toobert et al(2000). HbA1c values were assessed using HPLC method. The assessments were carried out at baseline, at 3 months and at 6 months. After the baseline assessment, subjects were randomly allocated to experimental and control groups using block randomization technique. Subjects in experimental group received both routine hospital treatment and behavioral intervention. Three educational sessions were delivered individually at an interval of two weeks. Intervention combined a behavior change protocol along with interventions focusing on enhancing self efficacy skills. Control group received routine hospital treatment which included drug therapy and nutritional counseling. Follow up at 6 month showed an attrition of four subjects in experimental group and six subjects in control group. Data collected were analyzed using SPSS version 16. Intervention effect was measured as the difference between the initial value and subsequent values of s*elf efficacy, self care behavior and HbA1c values*. To compare the pre-test and post-test difference independent t test/modified t was used depending on whether the variances are significantly different or not.

FINDINGS

Socio-demographic variables:

Study showed that majority of subjects were in the age group of 51-60 (40.67% in experimental and 42.67 % in control group). In the experimental group majority were males (53.33 %) and in control group majority were females (52.67 %). Majority of subjects in experimental (62.67%) and control group (60.67%) were Hindus. Subjects were mostly residing in urban areas (experimental 74% and control 76%). Majority of them were married (82.67 % in experimental and 83.33% in control group). With regard to the educational status, majority (36.67 % in experimental and 42.67 % in control group) hold an

intermediate or post high school diploma. However, majority of them (56.67% in experimental and 50 % in control group) were unemployed. Regarding income, majority of subjects in experimental group (36.67 %) and control group (42.67%) earn between 13420-17899 per month. Majority of subjects in experimental group (54 %) and control group (64%) belonged to upper middle class. Majority of them lived with spouse and children(experimental 46.7% and control group 44%) who also contributed major chunk of family income (experimental 74.66% and control 62.66%). A non-vegetarian dietary habit was followed by majority of subjects in experimental (94 %) and control group (96 %). Regarding the habits, none of the females had the habit of smoking or alcoholism. Hence describing habits among only males, it was found that majority of them did not have any habits in experimental group (35%) and majority in the control group (40.85%) had the habit of drinking alcohol. The socio demographic characteristics of subjects in both the groups were similar. Hence the groups were comparable and homogeneous except for habits.

Morbidity variables:

Majority of the subjects from both the groups (43.33% in experimental and 38.67% in control group) were diabetics since past 6-10 years. Allopathic system of medication was followed by majority of subjects in experimental (82.67%) and control group (79.33%). Majority of them were treated with only oral anti diabetic agents (76.7% in experimental and 68% in control group). Majority of subjects (92.67% in experimental and 97.33% in control group) were put on oral anti diabetic agents soon after diagnosis. With regard to medication adherence, majority of them (69.33% in experimental and 76% in control group) were adherent. Usage of glucometer for self monitoring of blood sugars was not a practice in majority of subjects in experimental group (70%) and control group (77.33%). Family history of diabetes was noticed in 82.62 % of subjects in experimental group and 74.67 % in control group. Either father or mother was a diabetic in 48.67 % of subjects in experimental group and 62.67% in control group. Neuropathy was the diabetic complication reported in majority of subjects in both groups (25.33% in experimental and 19.33% in control group) Majority of subjects (44.67%) in experimental and (42%) in control group had both hypertension and dyslipidemia as co-morbidities. The groups were comparable and homogeneous in terms of morbidity characteristics.

Table 1: Comparison of difference in total self efficacy and self care behavior scores between experimental and control group. (N=290)

Total scores of	Difference	Experimental group (n=146)		Control group (n=144)		t/ modified t	df	p Value
		Mean/ Median	SD/ IQR	Mean/ Median	SD/ IQR			
Self efficacy	3rdmonth and baseline	29.77	9.43	1.99	8.08	26.90	288	0.001
	6thmonth and baseline	27.12	9.63	-11.00	9.71	23.97	288	0.001
	6thmonth and 3rdmonth	*-3.00	10.00	-1.00	6.00	-0.69	274.96	0.485
Self care behaviour	3rdmonth and baseline	*29.00	9.00	0.50	8.00	39.65	261.55	0.001
	6thmonth and baseline	30.29	7.75	-2.05	6.79	37.75	288	0.001
	6thmonth and 3rdmonth	1.45	5.91	-2.30	5.36	5.64	288	0.001

*Median and Interquartile range are computed because of skewed distribution. Modified t test is used.

Table 1 shows that mean difference in self efficacy between 3rd month and baseline was significantly (p<0.001) higher in experimental group (29.77± 9.43) than in control group (1.99±8.08) and that between 6th month and baseline was significantly (p<0.001) higher in experimental group(27.12± 9.63) than in control group(-11±9.71). The median difference in self efficacy between 6th month and 3rd month was not significant (p<0.485)

Median difference in self care behaviour between 3rd month and baseline was significantly (p<0.001) higher in experimental group (29.00±9.00) than in control group (0.50±8.00) Mean difference in self care behavior between 6th month and baseline was significantly (p<0.001) higher in experimental group (30.29±7.75) than in control group (-2.05±6.79). and that between 6th month and 3rd month was significantly (p<0.001) higher in experimental group (1.45±5.91) than in control group (-2.30±5.36)

Table 2: Comparison of difference in HbA1c values between experimental and control group.

	Difference in HbA1c Values	Experimental group (n=146)		Control group (n=144)		t/ modified t	df	p Value
		Mean/ Median	SD/ IQR	Mean/ Median	SD/ IQR			
HbA1c	3rdmonth and baseline	0.940	0.501	-0.100	0.565	16.560	288.000	0.001
	6thmonth and baseline	*1.000	0.700	-0.400	0.570	25.519	276.953	0.001
	6thmonth and 3rdmonth	0.130	0.420	-0.250	0.470	07.395	283.441	0.001

*Median and Interquartile range are computed because of skewed distribution. Modified t test is used.

Table 2 shows that the difference in HbA1c value between experimental group and control group at baseline and third month, baseline and sixth month, between sixth month and third month are significant at 0.001 level.

DISCUSSION

The current study was conducted to evaluate the effects of a behavioral intervention on self efficacy, self care behavior and HbA1c values among patients with type 2 diabetes mellitus at baseline, third month and sixth month. The mean difference in overall self efficacy between third month and baseline, sixth month and baseline, between sixth month and third month were significantly higher (p<0.001) in experimental group than in control group. Similar findings were reported in other studies.[4] The mean difference in overall self care behaviour between third month and baseline, sixth month and baseline, between sixth month and third month were significantly higher (p<0.001) in experimental group than in control group. Difference in HbA1c value between baseline and third month, baseline and sixth month, between sixth month and third month were significant (p<0.001). The findings are consistent with several studies where the intervention group showed statistically significant improvement in diabetes self-efficacy, diabetes self-care behaviors and HbA1c values.[5,6,7] It was concluded that adding a behavioural intervention along with routine diabetic care enhances their confidence in self management of the disease which in turn improves their self care behavior and HbA1c values.

Acknowledgement: Authors thank Dr. Nihal Thomas, Endocrinologist (Christian Medical College, Vellore) for his useful suggestions and comments.

Conflict-of-Interest : Authors declare that they have no conflict of interests.

Source of Support: The study was self funded.

Ethical Clearance: Ethical clearance was obtained from institution review board. Confidentiality of

subjects was ensured.

REFERENCE

1. Ramachandran A, Wan Ma RC, Snehalatha C. Diabetes in Asia. Lancet. Mar 2010. 375: 408-418
2. Mohan V, Pradeepa R. Epidemiology of diabetes in different regions of India. Health administrator .April 2009, Vol: XXII Number 1& 2 - 2009 : 1- 18
3. Ramachandran A, Snehalatha C, Kapur A, et al. High prevalence of diabetes and impaired glucose tolerance in India. National Urban Diabetes Survey. Diabetologia 2001; 44 : 1094-101.
4. Shi Q, Ostwald SK, Wang S. Improving glycaemic control self-efficacy and glycaemic control behaviour in Chinese patients with type 2 diabetes mellitus: randomised controlled trial. J Clin Nurs. 2010 Feb;19(3-4):398-404.
5. Mishalia M, Omera H ,A D Heymannb DA. The importance of measuring self-efficacy in patients with diabetes. Family Practice (2011) 28 (1): 82-87.
6. Sharoni AS, and Wu VS, Self-efficacy and self-care behavior of Malaysian patients with type 2 diabetes: a cross sectional survey.Nursing and Health Sciences (2012), 14, 38–45
7. Zareban I, Niknami S, Rakhshani F, The Effect of Self Efficacy Education Program on reducing Blood Sugar Levels in Patients with Type 2 Diabetes, Health Education & Health Promotion (HEHP) (2013) Vol. 1 (1): (67- 79).

DOI Number: 10.5958/0974-9357.2016.00080.5

Impact of Stress for Psychiatric Morbidity among Adolescent: A Review

S Sujithra

Assistant Professor, Saveetha College of Nursing, Saveetha University, Saveetha Nagaar, Thandalam

ABSTRACT

Adolescence is a stressful time frame both for the children and for the parents and also for the health personnel to protect them from various physical, psychological and environmental influences that occur due to their pubertal and hormonal influences. Many of the earlier studies had quoted that adolescent is a period of 'stress and storm'. But only the recent studies are focussing much on the impact of stress leading to one or more psychiatric morbidity due to chronic influence of this stress.Therefore this review article focuses on the impact of stress for one or more psychiatric morbidity among adolescent.

Keywords: *Impact of stress, psychiatric morbidity, adolescent.*

INTRODUCTION

World is a home for 1.2 billion people aged 10-19 years who constitute to the age group of adolescent according to the World Health organisation(WHO). Adolescents from 10-19 years occupy one-fifth of the world's total population[1]. National population of adolescent in India is 243 million, which is ranking as the highest when compared to all other countries like china(207 million), United states (44 million), Pakistan and Indonesia(41 million)[2]. At any given point 20% of the adolescent experience mental health problem, commonly depression or anxiety, and also a cause that leads to suicide among young people[3]. Mental health well-being is essential for a good quality of life, therefore happy, confident growth of adolescent leads to happy and confident adulthood, who directly serve for the well-being of the nation and hence it makes any policy maker to invest on the adolescent well-being considering the nation's future [4].

Review Methods: Reviews are obtained from important search engines like Google scholar, Pub med, Science direct, Sage Journals and key words like stress, stress among adolescent, risk factors for stress, adolescent, adolescent and stress, adolescent stress and gender difference, psychobiology of stress, psychiatric diseases and stress.

Corresponding author:
Mrs. S Sujithra,
Assistant Professor, Saveetha College of Nursing,
Saveetha University, SaveethaNagaar, Thandalam.
Email: ujithra.mathi@yahoo.com
Phone no: 9677453921

What is stress?

Majority definitions of stress put forth that stress is a sort of incongruent situation existing between an individual under the stress.According to Hans Selye, stress is due physical, psychological and environmental demands[5]. Adding to this Richard S.Lazarus, states that stress is a feeling experienced when a person feels that demands are exceeding his personal and social resources.Where's the transaction definition by Lazarus and Folkman states stress as a particular relationship that exist between a person and the environment that is appraised by person as exceeding his resources and endangers his well-being[6]. Stress is that event which goes beyond adaptive resources of an individual, social system[7]. Excessive stress leads to wide range of physical and mental health issues in an individual thereby disrupting the energy and behavior within an individual[8]. Therefore stress is a state where it creates physical or mental tension along with emotional distress and induce a painful feeling in an individual[9].

Who is an adolescent?

World health organization defines adolescence as

age between 10-19 year [16], they are further divided as early adolescence ie.11-14 year, middle adolescence ie. 15-17 year and late adolescence ie. 18-21[17]. and this Several Researchers focused attention on adolescent. According to their view adolescent is a period of stress and storm [10] and a struggling period in lifetime[11]. Also viewed as a period were major life changes occurs and that has effects on further life[12]. It is a period not only concerned with bodily change and sexuality also includes psychological changes, social changes, peer influence that leads to parental conflicts, mood disturbances and indulge in risky behaviors[13].

Adolescent and Stress:

As a focus at nationwide based survey done in Sweden further shows evidence that adolescent is a period of dramatic rise in stress and it was identified as the cause for serious stress related physical health problems among the adolescents[14]. For the past 20 years,steadily rising problem among adolescent was stress, tired, somatic complaints, physical tension and psychological tension[15]. Recognizing turbulence in adolescent growth stress related problems become as an inescapable norm. Considering these changes, it is therefore understandable that adolescent is a stressful period.

Adolescent stress and Gender differences:

Prevalence of stress symptoms is more among female adolescent when compared to the boys of same age group, which indicates that girls are more sensitive to stressor and facing different stressors in their lifetime than boys[18]. Adolescent girls exhibit more depressive and anxiety symptoms than boys of same age groups[19]. Girls are more prone to develop psychological problems eg.depression, stress due to childhood differences in gender socialization process [20].

Effects of stress on adolescents Health:

Prolonged and poorly managed stress can cause negative physical health, and also decreased mental and cognitive abilities among children and youth[21]. Adolescents who experience high levels of stress / chronic stress can deteriorate physical health by affecting the immune functions and also these individuals are thereby risk to develop diabetes, obesity, and heart diseases at later ages of life [22].Stress not only causes impact on the physical health but also leads to anxiety, depression, low academic performances, poor memory and poor language skills also [23,24].

When adolescent suffer with stress following are the signs of stress- Physical changes like: headache, muscle tension, stomachache, trouble sleeping and eating and anergia and emotional changes are nervousness, loss of enthusiasm, anger, shyness, withdrawal, feeling helplessness and hopelessness and behavioral changes are excess weight gain, poor eating habits[25]. As like the social and environmental factors, the genetic and biological factors play vital role in vulnerability towards stress. Minimizing the risk for negative behavioral health due to stress among adolescent can be done through understanding concepts of stress and its adverse effects from school teachers, family members, policy makers that can help them to cope with the stressful situations.

Adolescent psychobiology of stress:

Adolescent as a time for continuous brain maturation especially in the areas of cortical and limbic regions which therefore plays important role in adolescence emotional and physiological coincidence.Emerging research indicates that stress during this crucial period affect the neural maturation and hence becomes the cause for psychological morbidities such as anxiety and depression. The changes are observed in the brain during peri adolescent stage due to short and long term stress exposure which causes morphological plasticity of cortical and limbic regions.Hence the study shows that several factors contribute to stress induced neurobiological dysfunctions leading to long term effects on health and wellbeing[26]. Experience of stressor during the pubertal period rises the stress reactivity, anxiety, depression,and reduce the cognitive output during the adulthood.Reason behind these behavioral changes is due to decreased hippocampal volume volumes and alteration in neural plasticity. Stress also cause gonadal hormone changes and leads to disrupted sexual function, cognitive and emotionality[27].

Personality, stress and suicide:

Individual's personality also can be a source of stress.Adolescent who learns to fit in process, feels

minimal stress [28]. Neuroticism and psychoticism has a significant relation for suicide [29].

Stress and psychiatric disorders:

Prolonged stress induces the release of stress hormones and the person becomes at risk to develop physical problems pertaining to health like headaches, increased blood pressure and abdominal discomfort. Even severe stress can lead to stroke and heart attack at times[30]. Stress can be viewed as a psychological problem that leads to anger, fear and anxiety, distrust and can also affect the relationship. Long term stress can cause anxiety and depression and also damages the immune system and the individual is susceptible for viral infections[31]. High stress among adolescent become the triggering cause for the use of drug, engage in sexual behaviors and suicide [31].The stress in adolescent does not only occurs due to the multiple domains, but also the increased life events stress is associated with depression, anxiety, behavioral problems, anxiety[32].

Burden of Mental disorders:

There is a rise in mental disorders over recent decades. As per the WHO estimation about 450 million people are affected with mental disorders, added to it, the mental and behavioral disorders show 12% of global burden of disease. Still more alarming data is there can be increase to 15% by 2020. Out of these findings low and the middle income countries are having tha major proportions of psychiatric disorders [33].According to the 2012 study conducted in Pune the overall prevalence of lifetime mental disorders will be nearly 5 percent, and out of it males are at risk to develop the disorders due to the underlying causes like depression leading to one or two substance use and panic disorder[34]. Finding were similar to the prevalence rate of 5.8 percentage among the Indian population[35]. NIMHANS Bangalore findings of 2010, shows the prevalence of mental and behavioral disorders for 9.5 to 102 per 1000 population. An increase in wide prevalence of psychiatric disorders could be due to the focus of few studies on the isolated settings [36]. Prevalence of psychiatric disorders in India according to 2000 review was 70.5 per 1000 in rural and 73 per 1000 in urban population [37]. Among adolescent and children, during 1999 the prevalence of mental disorders was 9.4 percent[38]. Similarly in 2005 a study conducted in Bangalore estimated the prevalence of mental disorders as 12.5 percent. Stress in ongoing day to day and also chronic pain have the significance risk for suicide[39]. Women living in crowded or stressful conditions are more prone for common mental disorder[40]. Risk factors for children and adolescent mental helth disorders are physical stress as per the child characteristics are concerned, stressful life events and life-time history of exposure to stress[41].

Stress had effects on the health of the adolescent as the study finding show significant association with chewing tobacco and alcohol use[42]. Adolescent smokers had a higher rate of anxiety, stress and family conflicts[43]. Coping with the academic stress was better among the adolescents who had adequate social support and also shows a satisfied academic performance [44].

CONCLUSION

Adolescent is a stressful period when compared to all other stages in the lifecycle. In Spite of this effects on them, adolescents are at risk for mental and behavioral disorders were the alarming statistics had been added in the review. This gross in burden of mental and behavioral disorders shows that the impact of stress could be the cause of psychiatric problems among adolescent. Hence the timely interventions are to be planned both from the policy makers and health personnel to reduce the stress and its impact upon the adolescent, as the healthy adolescent of today can bring healthy nation for tomorrow.

Ethical Clearance: Obtained from Saveetha University Institutional Ethical Committee.

Source of Funding- Self

Conflict of Interest -Nil

REFERENCES

1. United Nations(UN): Department of Economic and social affairs, world population prospects: The2008revision.AvailablefromURL:http://www.un.org/esa/population/publications/wpp2008_highlights.pdf.
2. United Nations(UN): Department of Economic and social affairs, world population prospects:

The 2012 revision. Available from:URL: http: //esa.un.org/wpp/.

3. World Health Organisation (WHO) meeting report (Geneva 2003): Caring for children and adolescents with mental illness, setting WHO directions.1-4.
4. Rao M:Promoting children's emotional well-being, Journal of Public Health Medicine 2001, 23(2):168.
5. Selye,H. (1976b). The Stress of life (Rev. ed.). New York,NY:Mcgraw-Hill.
6. Lazarus,R.S., &Folkman,S.(1984). Stress, appraisal and coping. New York: Springer.
7. Farmer,R.E., Monahan, L.H. and Hekeler, R.W.(1984). Stress management for human services, Beverly Hills, CA: Sage.
8. Mapfumo,I. (2012) Stress and coping among International students at a University in Eastern Zimbabwe: The Dyke A journal of the Midlands State University 6(2):154-175.
9. Lai, P.C., Chao, W.C., Chanff. Y.Y., Chang, T.T. (1996). Adolescent Psychology . Taipei: National Open University.
10. Hall, G.S. (1904). Adolescence: Its psychology and its relation to physiology, anthropology, sociology, sex, crime, religion, and education, Englewood Cliffs,NJ: Prentice-Hall.
11. Arnett, J.J. (1999). Adolescent storm and stress, reconsidered. American Psychologist, 54(5), 317-326.
12. Nounopoulos, A., Ashby, J.S., & Gilman, R.(2006). Coping Resources, Perfectionism and academic performance among adolescents.Psychology in the schools, 4(5), 613-622.
13. Marcia, J. (2006).Jag Identitetochobjektrelatio ner.(identity and object relations).In A.Frisen, &P.Hwang (Eds), Young people and identity.
14. Bremberg,S. (2006), Young people stress and mental health - analyses and suggested measures. 2006:77. Retrieved from stockholm: socialdepartementet, SOU. http: //www.regeringen.se/sb/d/108/a/67472.
15. Alfen,G., Ostberg, V., &Hjern,A. (2008). Perceived stress and recurrent pain in Swedish schoolchildren.Journal of psychosomatic Research, 65, 381-387.
16. Adolescent health and development.WHO Regional Office for south-east Asia Available from: http://www.searo.who.int/entity/child_ adolescent/topics/adolescent_health/index.html.
17. Stang J, Stiry M. Chapter 1.Adolescent growth and development.In:Guidelines for adolescent nutrition services, Minneapolis, MN Cnter for Leadership, Education and Training in Maternal and child Nutrition, Division of Epidemiology and community Health School of public health, University of Minnesota;2005 Available from: http://www.epi.umn.edu/let.pubs/img/adol/ _ch1.pdf.
18. Hagquist, C. (2009). Psychosomatic health problems among adolescents in Sweden - are the time trends gender related? European Journal of Public Health, 19(3), 331-336.
19. Moksnes, U.K., Moljord, I.E., Espnes,G.A., & Byrne, D.G.(2010). The association between stress and emotional states in adolescents: the role of gender and self-esteem, Personality and individual differences, 49, 430-435.
20. Ruble.D.N.,Greulich, F., Pomerantz, E., &Gochberg B. (1993). The role of gender-related process in the development of sex differences in self-evaluation and depression. Journal of Affective Disorders, 29, 97-128.
21. Steinberg,L. (2005). Adolescence (7th ed.). New York, NY: McGraw-Hill.
22. Rosmond, R.(2005). Role of the pathogenesis of the metabolic syndrome.Psychoneuroendocrino logy, 30(1), 1-10.
23. Evans, G.W., &Schamberg., M.A. (2009).Childhood poverty, chronic stress, and adult working memory. Proceedings of the National Academy of Sciences, 106, 6545-6549.
24. Farah, M.., Nobel,K., &Hirt, H.(2007). The developing adolescent brain in socioeconomic context. In D. Romer (Ed), Adolescent psychology and the developing brain: Integrating brain and prevention science (pp.373-387), New York, NY: Oxford University Press.
25. Romer, G. (1993). Assessing stress in children: A Literature review. Presentation at the 1993 Mid-South Educational Research Association

Conference, (pp1-17). New Orleans, L.A.

26. Eiland,L., Romeo R.D (2013).stress and the developing adolescent brain.Neurosciene 249: 162-171, doi:10.1016/j.neuroscience.2012.10.048.
27. MaryHolder ,K., Jeffery Blaustein, D!(2014). Puberty and adolescence as a time of vulnerability to stressors that alter neurobehavioural process, Frontiers in Neuroendocrinology, 35(1) 89-110.
28. Sulaiman, et.al (2009). The level of stress among students in urban and rural.European journal of social sciences, volume 10(2), 179-184.
29. kerby, D.S.(2003). CART analysis with uit weighted regression to predict suicidal ideation from Big five traits. Personality and Individual differences, 35, 249-261.
30. BBC. (2013). Stress: symptoms, causes'.Daily News, May 16, p10.
31. The Centre for Adolescent Health (2006). Confronting teen stress A guide for parents, Teachers, and Youth service providers.
32. Byrne, D.G., Davenport, S.C., &Mazanov, J. (2007). Profiles of adolescent stress: The development of the adolescent stress questionnaire (ASQ).Journal of Adolescence, 30, 393-416.
33. World Health Organisation. The World health report 201- Mental Health:New understanding, New Hope. world health organisation 2001, Geneva.
34. Deswal BS, PawarA.An Epidemiological Study of Mental Disorders at Pune, Maharashtra. Indian Journal of Community Medicine. 2012; 37(2):116-21.
35. Reddy M V, Chandrashekar CR. Prevalence of mental and behavioral disorders in India: A meta-analysis. Indian Journal of Psychiatry. 1998;40(2):149-57.
36. Math SB, Srinivasaraju R. Indian Psychiatric epidemiological studies:Learning from past.Indian Journal of Psychiatry. 2010;52:95-103.
37. GanguliHC.Epidemiological findings on prevalence of mental disorders in India. Indian journal of Psychiatry.2000;42(1):14-20.
38. Hackett R, et.al .The Prevalence and association of psychiatric disorders in children in Kerala, south india.Journal of child psychology and psychiatry.1999;40(5):801-7.
39. Manoranjitham SD, et.al, Risk factors for suicide in rural south India. British Journal of Psychiatry. 2010;196(1):26-30.
40. Kermode M, et.al, Empowerment of women and mental health promotion: a qualitative study in rural Maharashtra, India.BMC Public Health.2007, 7:225.
41. Srinath S, et.al Epidemiological study of child and adolescent psychiatric disorders in urban and rural areas of Bangalore, India, Indian Journal of Medical Research 2005; 122:67-79.
42. SuchdayS,et. al. Urban stress and health in developing countries. Behavioural Medicine 2006, 32(3):77-86.
43. Sharma A, Sharma J. Tobacco use in adolescents: the role of psychosocial factors.Global Journal of Human social sscience 2010, 10(8):51-57.
44. Baqutayan S: Stress and social support. Indian Journal of psychological medicine. 2011, 33(1): 29-34.

DOI Number: 10.5958/0974-9357.2016.00081.7

Effectiveness of Foot Reflexology in Reduction of Labour Pain among Mothers in Labour Admitted at PSG Hospital, Coimbatore

Ancy Merin Mathew[1], Frincy Francis[2]

[1]Clinical Instructor, Vidyant Skills Institute, Noida U.P, [2]Lecturer, College of Nursing, Sultan Qaboos University, Muscat

ABSTRACT

Pregnancy and motherhood is a major milestone in the life of a female which changes her position in the family and society. But before a woman can savor the joy of holding her baby in her arms, she normally has to go through the tormenting pains of labour. Reflexology is a non-invasive and non-pharmacological method of pain relief. It is based on a system of zones and reflex areas on the feet. Through application of pressure on these reflex zones it not only copes with pain but also relieves tension, improves circulation and helps to promote the natural function of the related areas of the body.

The study was conducted on 30 women in labour in the PSG hospital. The Intervention was given to the Experimental group and pain assessed using Numerical rating scale. The calculated t value is 7.54 which is greater than the table value ($p<0.05$) of 2.763. This shows that there is a significant reduction in the intensity of pain among the experimental Group.

Keywords: *Labour pain, foot reflexology, active phase, first stage.*

INTRODUCTION

Labour pain, like any acute pain, has two components. First is the sensory or physical component, wherein the pain stimuli is transmitted to the brain; second is the affective component, which refers to how an individual subjectively interprets the painful stimuli. Any pregnant woman has the right to opt for a painless labour and delivery. If available in the hospital, she has a choice from epidural anesthesia, inhalation anesthetics, or administration of injected drugs. All of these procedures have the same mechanism of action – to block the first component of the pain pathway, the physical side but come along with side effects[1] .

Pain relief methods can be divided into two main groups: pharmacological and non-pharmacological ones. One of the most significant limitations associated with pharmacological pain relief is that almost every drug that is used for labour analgesia in the mother can pass through the placenta. This has deleterious effects on both the mother and the fetus. The fetus respiratory system may be weakened, and the mother experience long labour and reflex disorder in the second stage of delivery. Three principles that are essential to relieve pain in midwifery include simplicity, safety and maintaining fetal homeostasis, and the non-pharmacological methods satisfy all of these. There is no effect on delivery, and no maternal or fetal side effects [2,3]

BACKGROUND FOR THE STUDY

Fear of pain of childbirth leads to increase in the irregular use of caesarean method. World Health Organization proposed to decline to the rate of 10% Caesarean use until 2010, but its growth rate is increasing so that it has reached to 30% of the births. Pharmaceutical measures are often expensive and have harmful effects for reducing labour pain. In the pharmacological methods, the pain feeling would be reduced physiologically but psychological and emotional conditions of the mothers are ignored[4].

Although effectiveness of alternative modalities is proved by various studies it is not practiced in many of the hospitals. There is a need to increase the use of alternative modalities to relieve pain during labour. Reflexology as one of the branches of the complementary medicine with massage and skin contact on certain reflex points on feet, endorphins are secreted from pituatory and can reduce the pain of labour and anxiety. Thus this technique can bring about the sense of well being. Generally, reflexology techniques would stop the neural transmission of the pain message to the brain and subsequently the perception of pain relief through control gate.[5]

OBJECTIVES

- To assess the effectiveness of foot reflexology in reducing intensity of labour pain during active phase of labour among mothers in foot reflexology (experimental) group.
- To assess the intensity of labour pain during active phase of labour among mothers in routine care group.
- Compare the intensity of labour pain during active phase of labour among mothers in foot reflexology and routine care group.

HYPOTHESIS

There may be difference between the intensity of labour pain among mothers in the foot reflexology group and the routine care group.

MATERIALS AND RESEARCH METHODOLOGY

The research design used for the study was Time Series Design Of Quasi Experimental Design[6].The participants of the study were laboring women who were in their first stage of labour especially in the active phase with cervical dialatation 3 cm and more[7,8]. Using purposive sampling technique 30 women were chosen for the study 15 in the experimental group and 15 in the control group. The sample size was determined using the Mahajan's Formula[9,10]. The setting in which the study was conducted was the First stage room of the labour room at PSG Hospital & Research Centre, Peelamedu Coimbatore.

Assessment tool was prepared based on the objectives of the study. Pain was assessed using Numerical Pain Rating Scale which is a standardized validated tool. The tool used for the study consist of three sections

Section A: Demographic data which includes age, education, occupation, family income, type of family and religion.

Section B: Obstetrical data of mothers which includes gestational weeks, gravida and antenatal education.

Section C: Assessment of labor pain using Numerical Pain Rating Scale

Score interpretation: Intensity of labour pain of mother is assessed using Numerical Pain Rating scale. Numerical Pain Rating Scale consists of a 10cm straight line which is labeled. The extreme left end indicate 'No pain' and extreme right end indicate 'Severe pain'.

0 - No pain 4-6 - Moderate 1-3 - Mild pain 7-10 - Severe pain.

Technique of Data Collection:

Technique used for data collection was interview and observation. Mothers who met the criteria were selected for study. After selecting, samples were grouped into foot reflexology group and routine care group. Mothers were explained regarding foot reflexology. Consent for participating in the study was taken from them. Demographic and obstetric data were collected by interview technique and from medical records. Mothers were identified and selected from 3-4 cm cervical dilatation onwards after per vaginal examination. Assessment of labour pain was done by using Numerical Pain Rating Scale for both mothers in foot reflexology group and routine care group.

Data Analysis: Descriptive statistics are used to describe the frequency and percentage of the variables and Inferential Statistics used is the independent 't' test to assess the effectiveness of foot reflexology on labour pain.

FINDINGS AND INTERPRETATIONS

Findings related to the demographical data.

Maximum mothers in both the groups belonged to age group of 20- 22 years. All mothers participated

in the study had education level of high school and above in both the groups. Among the 30 mothers who participated in the study maximum mothers who in both the group were unemployed. Majority of mothers(13) were between the income range of 5001-10,000 rs. Among 30 mothers maximum mothers(22) belonged to nuclear family.

Findings related to the obstetrical data.

Maximum mothers (8) from foot reflexology and 7 from routine care group were in gestational age of 38 weeks. Majority (16) of them were Multipara. None of the mothers had attended any type of antenatal or childbirth classes.

Table 1: Findings related to the assessment of intensity of labor pain in relation to foot reflexology.

Sl. No	Pain score	O_1		O_2		O_3		O_4		O_5		O_6		O_7		O_8	
		Reflexology	Routine	Reflexology	Routine	Reflexology	Routine	Reflexology	Routine	Reflexology	Routine	Reflexology	Routine	Reflexology	Routine	Reflexology	Routine
1	No pain	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
2	Mild pain	14	_	12	_	12	_	12	_	_	_	_	_	_	_	_	_
3	Moderate pain	1	15	3	15	3	15	3	13	14	_	13	_	12	_	10	_
4	Severe pain	- _	_	_	_	_	_	_	2	1	15	2	15	3	15	5	15

In the first observation 14 mothers in reflexology group had mild pain and all 15 mothers in routine care group had moderate pain. During the last observation only 5 mothers in reflexology group experienced severe pain where as all mothers in routine care group had experienced severe pain.

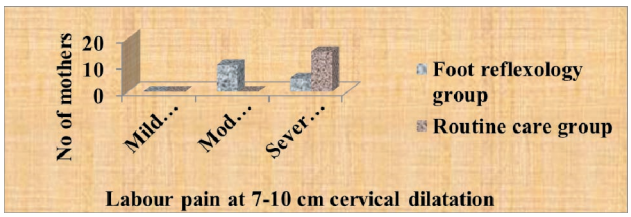


Figure 1: Assessment of Level of Labour Pain in Relation to Foot Reflexology at 3-6cm Cervical Dilatation.

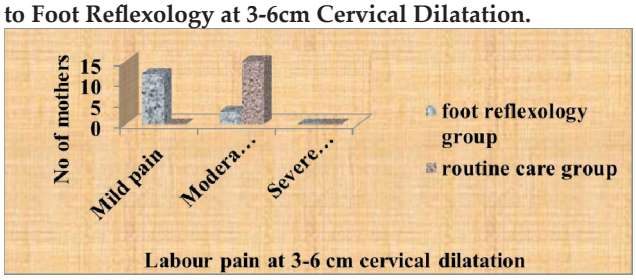


Figure 1.1 : Assessment of Level of Labour Pain in relation to Foot Reflexology at 7-10cm Cervical Dilatation

Table 2: Comparison of mean intensity of pain score, SD and t value of foot reflexology and routine care group at 3-10 cm cervical dilatation.

Sl. No	Cervical dilatation	foot reflexology group n=15		routine care group n=15		t test	P value
		Mean pain score	SD	Mean pain score	SD		p<0.05
1	3-10cm	**4.67**	1.01	**6.81**	0.29	7.54	2.763

The Mean pain score (6.81) is significantly higher in the routine group than the mean pain score (4.67) in the foot reflexology group. The calculated t value is 7.54 which is greater than the table value ($p<0.05$) of 2.763. This shows that there is a significant difference between the intensity of labour pain among mothers in the foot reflexology group and the routine care group and hence research hypothesis is accepted.

DISCUSSION

The researchers in their current study highlighted that the experimental group that received foot reflexology as intervention showed reduced pain

intensity. In a similar type of study conducted at selected hospitals in Isfahan, 88 primiparous women who were admitted to the labour room were utilized in the study . The reflexology group showed significant difference in the Pain Rating Index[11]. A study done in Copenhagen at Gentofte Hospital also supported the findings of the present study .Out of 65 women, 58 who received reflexology had reported pain relief[12]. A research study done to find effect of reflexology on first stage of labour pain among 70 women who had a cervical dilatation of 3-4 cm. The women selected for the study were divided into intervention group and control group. The intervention group received reflexology for 20 minute in each foot during contraction in active phase of labour. The control group underwent foot massage but not on specified reflexology points. Severity of pain was assessed by using Visual Analog Scale before and after the intervention. The severity of labour pain reduced after intervention in experimental group whereas labour pain increased in control group[13]. A randomized control trial was conducted among 120 parturient women admitted for delivery at Shahid Akbarabadi Hospital, Tehran. The samples selected were allocated into three groups. First group received foot reflexology for 40 minutes on each foot, second group was offered emotional support and third group had received only routine care. Using Visual Analog Scale, the severity of pain was assessed before and after intervention and also at cervical dilatation of 6-7cm and 8-10 cm respectively. During cervical dilatation of 6-7cm as well as 8-10cm, pain intensity was significantly lower in reflexology group compared to other two groups ($p<0.001$)[14].

CONCLUSION

Labour is an unforgettable moment in any woman's life but it happens with severe pain. Therefore a measure which reduces the intensity of labour pain adds up little more to this happy moment. This study highlights that foot reflexology is a non pharmacological, inexpensive, non- invasive, painless and harmless pain relieving method, which is effective in reducing intensity of labour pain during labour. Reflexology offers a woman in labour a very unobtrusive and gentle method of pain control.

Acknowledgement: The authors would like to acknowledge the efforts of the research guide Prof. Baby Venkatesh, HOD, OBG Dept, PSG College of Nursing. The authors would also like to acknowledge the participants who were in the state of pain and yet extend cooperation to carry out the study.

Conflict of Interests: The author declares no conflict of interest with any person or institutions.

Source of Funding: The study has no source of funding. It is self-funded.

Training: The primary researcher had taken the foot reflexology training and got certified to perform the same from an experienced foot reflexologist.

Ethical Clearance: The Proposal of the study was submitted to the Institutional Ethics Review Board of PSGIMR for their review and ethical clearance . After obtaining the ethical clearance from the board , the permission to conduct was obtained from the PSG Hospital to use their labour room for conducting the study and informed consent was obtained from the individual participants after explaining the intervention and the purpose of the research.

REFERENCES

1. Tournaire M.Theau-Yonneau A. Complementary and Alternative Approaches to Pain Relief During Labor. Evidence Based Complementary Alternative Medicine. 2007.4(4):409-417.
2. Cunningham, F.G., Gant, N.F., Leveno, K.J., Bloom, S.L., Hauth, J.C., Gillstrap, L.C., and Wenstram, K.D. William's Obstetrics. 22nd edition. Newyork: McGraw-Hill Publications; 2005.
3. Brenda, A. Alternative Therapies for the Management of Pain in Labor and Deliver. Clinical Obstetrics and Gynecology. 2002;44(4): 704-732.
4. Smitt C.A, et al.Reflexology and other manual methods for pain management in labour, Cochrane data base of systemic review. 2012.
5. Trout, K.K. The Neuromatrix Theory of Pain: Implications for Selected Non pharmacologic Methods of Pain Relief for Labor". Journal Midwifery Women's Health. 2004;49:482-488.
6. Polit, D.F., Hungler, B.P. Essential of Nursing Research Principles and Methods. 6th edition.Philadelphia: Lippincott Company; 1999.

7. Lowdermilk and Perry. Maternity and Women's Health Care. 9th edition. Missouri: Mosby Elsevier;2007.
8. Susan, A. Orshan. Maternity, Newborn and Women's Health Nursing.Philadelphia: Lippincott Williams and Wilkins. 2008.
9. Mahajan, B.K. Methods in Biostatistics. 1st edition. New Delhi: Jaypee Brothers Publications;1991.
10. Sunder Rao, S. An Introduction to Biostatistics. 11th edition. Vellore: Orient Longman Publications; 1996.
11. Mahboubeh Valiani.,et al. Reviewing the effect of reflexology on the pain and certain features and outcomes of the labour on the primiparous women. Iranian Journal of Nursing and Midwifery Research. 2010;15(1):302-310.
12. Firoozi M. Application of Reflexology in midwifery. Journal of Nursing and Midwifery Mashhad University of Medical Sciences. 2003. 9(2).
13. David, RM., et al. Effectiveness of Non-pharmacological Strategies in Relieving Labor Pain. Archives of Internal Medicine. 2009;43(2): 438-445.
14. Dolatian,M.,et al.The effect of reflexology on pain intensity and duration of labour on primiparas. Iranian Red Cresent Medical Journal. 2011;13(7): 475-479.

DOI Number: 10.5958/0974-9357.2016.00083.0

Cord Blood Banking

K Nalini Devi

Assistant Professor, Teerthanker Mahaveer College of Nursing, Teerthanker Mahaveer University, Moradabad

ABSTRACT

Umbilical cord blood (UCB) contains stem cells that have already successfully treated a variety of diseases, including leukaemia, lymphomas, hemoglobinopathies, immunodeficiency, and disorders of metabolism; ongoing research continues to explore additional diseases for potential treatment. Cord blood can be stored in private banks or public banks. Private cord blood banks save cord blood for use by the family only, at a cost. Public cord blood banks accept donations and the cord blood is then used for the general public and/or research.

Keywords: *Cord Blood Banking,stem Cells,placenta*

INTRODUCTION

Up until the 1970s, the placenta and umbilical cord were discarded after birth without a second thought. But around this time, researchers discovered that umbilical cord blood could supply the same kinds of blood-forming (hematopoietic) stem cells as a bone marrow donor. They started collecting and storing umbilical cord blood.

These blood forming stem cells are primitive (early) cells that are capable of developing into the three types of mature blood cells found in blood — red blood cells, white blood cells, and platelets. Cord-blood stem cells also may have the potential to give rise to other cell types in the body.

Some serious illnesses (such as certain childhood cancers, blood diseases, and immune system disorders) require radiation and chemotherapy treatments to kill diseased cells in the body. Unfortunately, these treatments also kill many "good" cells along with the bad, including healthy stem cells that live in the bone marrow.

Corresponding author:
K Nalini Devi
Assistant Professor, Teerthanker Mahaveer College of Nursing, Teerthanker Mahaveer University Moradabad. E-mail: mahathiraja2008@gmail.com
Mob.:: 7500576048

When this happens, some kids can benefit from a stem cell transplant from a donor whose cells closely match their own. Blood-forming stem cells from the donor are transplanted into the child who is ill, and those cells go on to make new, healthy blood cells and boost the child's blood-producing and immune system capability.[2]

WHAT IS CORD BLOOD?

Umbilical cord blood is the blood that remains in the vein of the umbilical cord and placenta at the time of birth. Cord blood is rich in stem cells. Cryo-Cell's umbilical cord blood service collects , processes and cryogenically preserves these cells for potential medical use. Umbilical cord blood stem cells have been used to treat nearly 80 diseases.[4]

COLLECTION OF CORD BLOOD

Cord-blood banking isn't routine in hospital or home deliveries. It's a procedure to choose and plan for beforehand.

Collection of the cord blood takes place shortly after birth in both vaginal and caesarean (C-section) deliveries. It's done using a specific kit that parents usually order ahead of time from their chosen cord-blood bank.

Blood is collected immediately after delivery by an obstetrician, nurse, or technician. After birth, the umbilical cord is cut and clamped on one side. To collect blood, a small needle is passed into the

umbilical vein on the part of the cord that's still attached to the placenta. Blood collection can happen either before or after the placenta is delivered.[2]

Typically, 1 to 5 ounces are collected. The entire process takes less than 10 minutes.[3]

STORING

After collection, the cord blood is taken by courier to the cord-blood bank. Once there, the sample is given an identifying number. Then the stem cells are separated from the rest of the blood and are stored **cr yogenically** (frozen in liquid nitrogen).

How long can blood-forming stem cells last when properly stored?

In theory, stem cells should last forever, but cord-blood research only began in the 1970s, so the maximum time for storage and potential usage is still being determined. Blood-forming stem cells that have been stored for more than a decade have been used successfully in transplants.

There is no cost involved when donating cord blood to a public bank, though some doctors or midwives may charge a small fee to collect the blood. The cost for storing cord blood privately is approximately $1,000-$2,000, in addition to a yearly maintenance fee (usually around $100). You also might pay an additional fee of several hundred dollars for the cord-blood collection kit, courier service to the cord-blood bank, and initial processing.[2]

In India the cost for storing blood is approximately rupees 60000 -120000. And the maintenance charge is rupees 6000 annually.

CORD BLOOD BANKING

Cord-blood banking basically means collecting and storing the blood from within the umbilical cord (the part of the placenta that delivers nutrients to a fetus) after a baby is born.

There are two types of banks that store cord blood:

1. Public banks collect donated cord blood for research or for use by anyone who may need it. There is usually no charge associated with this service. After birth, blood is collected, anonymously marked, and sent to a public bank to potentially save the life of another child one day.

If you choose this option and your child or a family member later develops a disease that requires a stem cell transplant for treatment, you won't be able to obtain the donation you made to the bank.

2. Private Banks store cord blood for personal use by the family. There is a fee associated with this service. People who have a family history of disease that can be treated with stem cell transplants sometimes consider this option.

Less commonly, people choose to privately bank their newborn's cord blood on the off chance that someday their child or a sick family member could be treated with it. This practice isn't recommended, however, since the costs associated with it are high and the chances of a family member ever using the cord blood are slim.[2]

TRANSPLANTATION

Cryogenic blood-forming stem cells can be thawed and used in either **autologous** procedures (when someone receives his or her own umbilical cord blood in a transplant) or **allogeneic** procedures (when a person receives umbilical cord blood donated from someone else — a sibling, close relative, or anonymous donor).[2]

WHAT ARE THE BENEFITS OF CORD BLOOD BANKING?

Cord blood is a rich source of blood stem cells. Stem cells are the building blocks of the blood and immune system. They have the ability to develop into other types of cells, so they can help repair tissues, organs, and blood vessels and can be used to treat a host of diseases.

Stem cells are also found in bone marrow, human embryos, fetal tissue, hair follicles, baby teeth, fat, circulating blood, and muscle. Every part of the human body contains some stem cells, but most are not a rich enough source to be harvested for therapeutic applications.

In patients with conditions like leukemia, for instance, chemotherapy is often used to rid their body of diseased cells so that normal blood cell production

can be restored. Once that happens, the disease goes into remission.

If the treatment fails or disease recurs, however, doctors often do a stem cell transplant. A transfusion of stem cells from the bone marrow, peripheral blood (blood in the bloodstream), or cord blood from a healthy donor can help create a new blood and immune system, giving the patient a better chance of making a full recovery.

Unlike the stem cells in bone marrow or peripheral blood, stem cells in cord blood are immature and haven't yet learned how to attack foreign substances. It's easier to match transplant patients with cord blood than with other sources of stem cells because the cord blood stem cells are less likely to reject the transfusion. This makes cord blood an even more valuable resource for ethnic minorities, who have a harder time finding stem cell matches.

CONCLUSION

Umbilical cord blood was once thought of as a waste product. Now, years after the first successful umbilical cord blood transplant, Cord blood becomes important to preserve in cord blood bank for treating 80 diseases like blood disease and immune system disorder, to protect long term health. Blood-forming stem cells from the donor are transplanted into the child who is ill, and those cells go on to make new, healthy blood cells and boost the child's blood-producing and immune system capability.

Acknowledgement: I wish to acknowledge my philosopher Mr. Jeyakanthan and Mrs. Krishnavenimurugesh for their dedication in mentoring and encouraging me.

Ethical Clearance: None

Sources of Funding: Self

Conflict of Interest: None

REFERENCES

1. http://www.nursingcenter.com/journalarticle?Article_ID=1249203&Journal_ID=54021&Issue_ID=1249184&expiredce=1
2. http://kidshealth.org/en/parents/cord-blood.html#
3. http://www.babycenter.com/0_cord-blood-banking-what-it-is-why-consider-it_1362261.bc
4. http://www.cryo-cell.com/cord-blood-banking
5. http://www.lifecell.in/our-services
6. http://www.cordblood.com/benefits-cord-blood/umbilical-cord-blood-banking
7. http://www.parents.com/pregnancy/my-baby/cord-blood-banking/cord-blood-banking-worth-it/
8. https://www.corcell.com/the-benefits/cord-blood/
9. http://www.babycentre.co.uk/x543058/can-i-store-my-babys-umbilical-cord-blood-for-medical-purposes
10. http://www.smartcells.com/.

DOI Number: 10.5958/0974-9357.2016.00084.2

An Exploratory Study to Determine the Quality of Life (QoL) and Factors Leading to Imprisonment among Women Prisoners in a Selected Women Prison

Asha P Nair[1], Tessy Treesa Jose[2], Daisy Josephine Lobo[3]

[1]MPhil Nursing Student, [2] HOD, Mental Health Nursing, [3]Associate Professor, Department of Medical Surgical Nursing, Manipal College of Nursing, Manipal University, Karnataka, India

ABSTRACT

The research study titled "An exploratory study to determine the quality of life (QoL) and factors leading to imprisonment among women prisoners in a selected women prison" was based on the objectives; to determine the quality of life of women prisoners, to explore the factors leading to imprisonment, to find the association between the QoL of women prisoners and selected socio demographic and clinical variables, to find the association between the QoL and domains of quality of life of women prisoners and to find the association between the QoL of women prisoners and factors leading to imprisonment. Survey approach with an exploratory design was adopted and was conducted in a selected women prison. The conceptual framework was based on the Quality of Life model at the Centre for Health Promotion, University of Toronto. The study had primary outcome variables as quality of life and factors leading to imprisonment among women prisoners. Seventy samples were selected by purposive sampling technique. The tools used for the study were validated, pretested and the reliability also was established. The major findings of the study revealed that 43 (61.4%) participants have good quality of life. Among seventy participants 21 (30%) of them had poor QoL in psychological domain. Thirty seven (52.9%) of the participants had good QoL score in physical domain and 36 (51.4%) of them had medium QoL score in psychological domain. Majority 51 (72.9%) of the samples had good QoL score in social domain and 46 (65.7%) of them had good QoL score in environmental domain. Majority i.e. 61 (87.1%) of them had good QoL score in spiritual domain. Among the 70 participants, 10 (14.3%) of the participants had poverty as the leading reason for committing crime, followed by 8 (11.4%) having physical abuse and another 8 (11.4%) having family breakdown as the factor leading to imprisonment. Among the socio demographic variables; age of women prisoners has statistically significant association with the QoL of women prisoners ($p<0.05$). Among the clinical variables; Blood pressure and Lipid profile (Total serum cholesterol) have statistically significant association with quality of life ($p=0.048$). Physical, psychological and social domains have statistically significant association with the QoL of women prisoners ($p<0.05$). Factors leading to imprisonment has statistically significant association with the QoL of women prisoners ($p <0.05$).

Keywords: *Quality of Life (QoL), Factors Leading to Imprisonment, Women Prisoners.*

INTRODUCTION

A great degree of inequality in meeting various special requirements and demands of women prisoners exists as majority of the prison facilities are wrought for the male inmates. The influence of incarceration among women totally varies from that of men. The reported chief problem areas in United Nations for Women Prisoners are; congestive housing, discordant staffing pattern, being away from family, absence of health care and skill training programs, traumatic experience of women prisoners due to physical, mental and sexual abuse and the ill

Corresponding author:
Asha P Nair
MPhil Nursing Student, Manipal College of Nursing, Manipal University, Manipal, Karnataka-576104
E mail:asharahulp@gmail.com

effects of incarceration of mothers on their children.[1]

Bergh V et al in the bulletin of the WHO in 2011 reported that prisoners are having the worst health status while comparing among any other population. As there is increased rate of imprisonment in most of the countries; health inside the prison is a major public health matter. The high imprisonment rate can also lead to crowding and disproportionate occurrence and existence of health issues in prisons. The health care needs of the women prisoners are mostly brushed off since they comprised of a small proportion in the prison set up. The current scenario of healthcare provision to the incarcerated women reveals that the prison setup is inconceivable in meeting the health care needs of women in prison. It is evident that there exists a great gender difference in the policies and procedures as well as violating human rights. It is also evident that there is a failure to accept the different healthcare needs of women prisoners such as maternal and reproductive health problems, mental illness and drug abuse in comparison with the male prisoners. Therefore gender inequality and discrimination in jails should be taken care by the government, policy makers and the prison management. Immediate interventions should be initiated to eliminate the prisoner's violation of human rights, lack of health care and gender inequalities.[2]

A study conducted by Pandey S P in 2004 in Utter Pradesh reported that the correctional system in our country is one among the ancient and vast comparing to other countries of the world. There were obscure and basic structural changes in social, economic and cultural environment that in turn affect the physical environment. The traditional roles of women were mainly restricted as housewives, which recently turned over to have a job or profession. Now women are well balancing their domestic and professional roles. Programs and policies meant for women, women centered programs, policies and projects catalyzed the process of women empowerment and their involvement financial activities, politics and society has expanded to a higher extent. Even though due to broken family, marital conflicts, competitive attitude and dissatisfaction became the influencing factors behind criminal behavior.[3]

Pandey S P also reported that the life of women prisoners is very stressful and their living conditions are pathetic. The prisons were mostly overcrowded and there were inadequate clothing and toilet facilities. The general health status of women in most of the prisons was cumbersome. The educational, occupational as well as recreational amenities were scarce. However the prime goal of being imprisoned is rehabilitation of the incarcerated, the rehabilitation programs are not yet successful in India. As most of the women prisoners were hesitant to express their necessary requisites and grief, the needs become unattended by the prison staff. The sufferings of the inmates were not fully reverberated in front of the higher authorities.[3]

An article by Math S B, Murthy P et al in 2011 revealed that; in fact the prisoners had high degrees of mental distress and mental illnesses compared to the general population. Globally women prisoners constituted a minority; but the rate of psychological distress and mental health problems were much higher. The number of women captives is also increasing globally. Women experience more problems in prison like gender discrimination, neglect, and violence, physical and sexual abuses than their male counterparts. Even though the amplitude of the unique health concerns of the incarcerated women is higher, little attention had been given. Mental health care and attention in prisons are almost non-existent.[4]

OBJECTIVES

- To determine the quality of life of women prisoners
- To explore the factors leading to imprisonment
- To find the association between the QoL of women prisoners and selected socio demographic and clinical variables
- To find the association between the QoL and domains of quality of life of women prisoners
- To find the association between the QoL of women prisoners and factors leading to imprisonment

MATERIAL & METHOD

The present used a survey approach with an exploratory research design. Population for the present study comprises of all the women prisoners in Women prison. The participants for the present study consisted of 70 women prisoners in a selected women prison, who fulfilled the inclusion criteria. Purposive sampling technique was used for this study.

The following data collection tools were developed by the investigator and used to collect the data;

Tool 1- Background proforma

Tool 1- Background information has two subdivisions; Part 1 and 2

Part 1: Socio demographic proforma

This was developed to obtain data regarding socio demographic variables which were collected by the investigator through an interview schedule. It consisted of 14 items.

Part 2: Clinical Proforma

It was developed to obtain data regarding clinical variables through record review. The data was collected by reviewing the health record of women prisoners kept in the women prison after confirming that the reports and readings were done within a period of six months.

Tool 2 -Semi structured interview schedule and record review

Tool 2 -Semi structured interview schedule was developed to obtain data regarding factors leading to imprisonment. One item with choices was included in the tool to obtain the reason/reasons for committing the crime.

Tool 3 - WPQoL (Women Prisoner's Quality of Life) Assessment questionnaire

WPQoL Assessment questionnaire was developed by the investigator to explore the quality of life of women prisoners. It addressed the QoL of women prisoners in the domains of physical, psychological, social environmental and spiritual using a five point scale. It measures the quality of life as poor, medium and good. Instructions were given in simple and understandable language. The total items were forty, zero as the minimum score and two hundred as the maximum score. The total quality of life score was interpreted as poor (0-65), medium (66-130) and good (131-200).

DATA COLLECTION PROCESS

The data collection procedure was carried out with the interview schedule and questionnaire. Assurance of confidentiality of their response was given and anonymity was maintained throughout the study by giving them pseudo names. At first rapport was established with the participants and the purpose of the study was explained to them. It was assured to them that all data would be kept strictly confidential and will be used only for study purpose. The investigator provided adequate instructions and explanations regarding the procedure to collect the data.

Ethical considerations

Formal permission was sought from Dean, Manipal College of Nursing prior to the conduction of the study. The formal administrative permission was obtained from the concerned authorities of the prisons and from the State Government. The study proposal was reviewed and approved by the Institutional Ethical Committee; Kasturba Hospital, Manipal and Institutional Research Committee, Manipal College of Nursing, Manipal. Subject information sheet was provided to the participants before data collection. Informed consent was obtained from the samples prior to the data collection procedure after explaining the risks and benefits in detail and they were assured the anonymity and confidentiality of information by the investigator.

FINDINGS

Descriptive and inferential statistics were used for the analysis of the data on the basis of objectives and hypotheses, using Statistical Package for Social Sciences (SPSS) version 20.

Description of the sample characteristics in terms of socio demographic variables

The data with regard to age, marital status and educational qualification revealed that 22 (31.4%)

of the participants belong to the age group of 51-60 years, 51 (72.9%) of them were married and many 22 (31.4%) had primary education only. Data on occupation show that 40 (57.1%) of the samples were unemployed/housewives. Data with regard to family income, religion and type of family revealed that 22 (31.4%) had monthly family income between Rs.3001-5000/month. 41 (58.6%) of the participants were Hindus and 38 (54.3%) had nuclear family.

Data on domicile show that 55 (78.6%) of the subjects were residing in rural areas. Data on number of children, family history of imprisonment and duration of imprisonment revealed that most 29 (41.4%) of them had one child, majority 60 (85.7%) of participants had no family history of imprisonment and many 27 (38.6%) of the participants had a duration of imprisonment as more than 1 year to 4 years. Data on type of sentence revealed that 51 (72.9%) of the participants had life imprisonment. Data with regard to history of imprisonment and visits by their relatives/friends shows that majority 62 (88.6%) had no history of imprisonment and most 58 (82.9%) of them had regular visits by their relatives/friends.

Description of quality of life

The mean QoL score is 130.86 and the standard deviation is 27.06. Domain wise mean and standard deviation is shown in the following table.

Domains	Mean	Standard deviation	Minimum score	Maximum score
Physical	26.80	6.014	15	35
Psychological	40.27	15.304	14	75
Social	32.94	6.855	17	40
Environmental	19.10	4.381	12	25
Spiritual	12.64	1.926	7	15

The data presented in table shows that psychological domain has the highest values of mean score 40.27 and standard deviation 15.304 among other domains of quality of life. Physical domain has minimum score as 15 and maximum score as 35, Psychological domain has minimum score as 14 and maximum score as 75, social domain has minimum score as 17 and maximum score as 40, environmental domain has minimum score as 12 and maximum score as 25 and spiritual domain has minimum score as 7 and maximum score as 15.

Association between the QoL of women prisoners and selected socio demographic variables

As the data followed normal distribution, to prove the association between the QoL of women prisoners and selected socio demographic variables, chi square test (using fisher's exact test) was used. The chi square value was computed between the QoL of women prisoners and selected socio demographic variables; age of women prisoners has statistically significant association ($p<0.05$), with the quality of life of women prisoners whereas other variables had no significant association with the QoL of women prisoners. This finding can be inferred that age of the women prisoners might have influenced the adjustment with the prison life and thereby quality of life also.

Association between the QoL of women prisoners and clinical variables

In order to prove the association between the QoL of women prisoners and clinical variables; chi square value was used. The chi square value computed between quality of life of women prisoners and clinical variables; Blood pressure and Lipid profile (Total serum cholesterol) have statistically significant association ($p =0.048$) with their quality of life. This infers that hypertension as well as hyperlipidemia may affect the quality of life.

Association between domains of QoL and QoL of women prisoners

The chi square value computed between domains of QoL and QoL of women prisoners; physical ($p<0.05$), psychological ($p<0.05$), and social domains ($p<0.05$), has statistically significant association with the QoL of women prisoners whereas environmental

and spiritual domains of QoL had no statistically significant association with the QoL of women prisoners.

Association between factors leading to imprisonment and QoL of women prisoners

The chi square value computed between the quality of life of women prisoners and factors leading to imprisonment; the factors leading to imprisonment has statistically significant ($p<0.05$), association with the QoL of women prisoners. Hence the null hypothesis was rejected and research hypothesis was accepted.

It is inferred that the factors lead to imprisonment has effect on overall quality of life of women prisoners.

Association between the psychological domain of QoL of women prisoners and factors leading to imprisonment

The chi square value computed between the psychological domain quality of life of women prisoners and factors leading to imprisonment was statistically significant ($p<0.05$), association with the psychological QoL of women prisoners.

The findings infers that the impact of factors lead to commit the crime as well as imprisonment may still causing psychological disturbances and has effect on psychological domain of QoL of women prisoners.

CONCLUSION

The overall quality of life among the female captives is found to be good indicates that they may perceive the prison more comfortable than their previous surroundings. This inference can be further supported by another finding of the present study that majority of the participants were from poor socio economic status and unemployed. They feel more secure inside the prison environment. There were many factors which led them for committing the crime and majority were agreed it as poverty and physical abuse. In prison there is provision of timely nutritious food, clothing, and other amenities for day to day lives. The healthy inmates can take part in making kitchen garden; sewing, cleaning the premises etc. and each will be paid daily wages. The family members or friends were allowed to visit monthly and telephone facilities were also available. The help of social welfare officer and advocate was within reach. In case of disease or other medical emergencies hospital facilities were also provided. These situations in turn may influence the overall quality of life of the inmates. The poor scores in psychological domain signal the need for screening, counseling and remedial services.

Acknowledgement: Authors are thankful to the Government officers and administrators of the selected institutions and the women prisoners who willingly participated in this study.

Source of Funding: Self

Conflict of Interest: Nil

REFERENCES

1. Women in Prison & Children of Imprisoned Mothers: Recent Developments in the United Nations Human Rights System Quaker United Nations Office.2010; www.quno.org
2. Bergh V, Brenda J, Gatherer, Alex, Fraser, Andrew et al. Imprisonment and women's health: concerns about gender sensitivity, human rights and public health. Bulletin of the World Health Organization (Bull World Health Organ), 2011 Sep; 89 (9): 689-94.
3. Pandey S P. Final Report Children of Women Prisoners in Jails: A Study in Uttar Pradesh; Planning Commission, Government of India, Pandit Govind Ballabh Pant Institute of Studies in Rural Development ; Lucknow : 2004.
4. Math S B, Murthy P, Parthasarthy R, Kumar C N, Madhusudhan S. Minds Imprisoned: Mental Health Care in Prisons. Publication, National Institute of Mental Health Neuro Sciences, Bangalore; 2011: Page 178-197

DOI Number: 10.5958/0974-9357.2016.00085.4

Knowledge, Attitude and Practice of Universal Precautions among the Hospital Staff at Sterling Hospital, Vadodara: A Hospital based Study

Medha Wadhwa[1], Pulkit Kalyan[2], Shashank Shekhar[3]

[1]Assistant Professor, Dept. of Healthcare Management, School of Management, [2]Senior Lecturer, Dept. of Public Health Dentistry, K M Shah Dental College, Sumandeep Vidyapeeth Vadodara; [3]Medical Resident, Ganesh Hospital, Gaziabad

ABSTRACT

Purpose: Universal precautions are intended to modify the physical environment and affect the social and microbiological environment for the benefit of potential hosts and care giver. It means taking routine safe working practices to protect staff and patients from infections by blood and body fluids. Thus the present study was under taken with the AIM to assess the knowledge, attitude and practice of hospital staff spectrum at a leading private hospital at Vadodara regarding universal precautions and thereby planning to develop required interventional strategies.

Materials and method: A questionnaire survey among the day shift hospital staff employed at the clinical settings like nurses, doctors, technicians etc. to gather information from them regarding the knowledge, attitude and practice of Universal Precautions at Sterling Hospital, Vadodara. The data was collected by filling of the close ended questionnaire which was developed by referring guidelines for Isolation precautions: Preventing transmission of infectious agents in health care setting 2007 developed in reference to Siegel et al. The questions were designed to cover different aspects of standard and transmission based-precautions. The whole population which included were all the day shift doctors, nurses and technicians etc. of general ward, ICCU, MICU, SICU, NICU, CCU, burns ward, renal transplant wing etc.

Results: Out of 100 respondents, 49 were males and 51 were females. 91% of the population gave a correct response regarding the basic concept of universal precautions. The result showed that knowledge and attitude are negatively correlated. The correlation between attitude and practice is very low, 0.5%, that means that 100% change in attitude leads to 0.5% change in practice of universal precautions. The correlation between knowledge and practice is 13.3% that is that 100% change in knowledge would cause 13.3% change in practice of universal precautions. The association among knowledge, attitude and practice of universal precautions is highly significant ($p<0.005$).

Conclusion: The staff spectrum which works in the clinical setting are following the high level of practice of universal precautions. There is an association between the knowledge, attitude and practice of universal precautions.

Keywords: *Universal Precautions, Knowledge, Attitude, Practice and hospital staff.*

Corresponding author:
Medha Wadhwa
Assistant Professor, Dept. of Healthcare Management, School of Management, Sumandeep Vidyapeeth Vadodara;
email – drmedhakalyan@gmail.com, +919537624644

INTRODUCTION

Health care associated infection is a major public health problem. At any given time 1.4 million people worldwide are estimated to be suffering from an infection acquired in a health facility. In 1983, the

US Centre for Disease Control and Prevention (CDC) published a document that recommended blood and body fluid precautions when a patient was known or suspected to be infected with blood-borne pathogens[1]. In 1987, the CDC recommended that regardless of patients' infection status, the precautions must be consistently used. This extension of blood and body fluid precautions to all patients is referred to as "**universal blood and body fluid precautions**" or simply "**universal precautions**." In 1996, the CDC included the universal precautions in a new prevention concept the so-called "**standard precautions**." The "standard precautions," which are devised to be used for the care of all patients in hospitals regardless of their diagnosis or presumed infection status, now replace the "universal precautions".[2] Universal precautions are intended to modify the physical environment and affect the social and microbiological environment for the benefit of potential hosts and care giver. It means taking routine safe working practices to protect staff and patients from infections by blood and body fluids. These involve the use of protective barriers such as gown, gloves, aprons, masks or protective eye wear which can reduce the risk of exposal of the health care workers' skin or mucus membrane to potentially infective materials.[3]

Thus the present study was under taken with the **AIM** to assess the knowledge, attitude and practice of hospital staff spectrum at a leading private hospital at vadodara regarding universal precautions and thereby planning to develop required interventional strategies.

OBJECTIVES

1. To check the level of knowledge, attitude and practice of standard precautions.

2. To test the association between knowledge, attitude and practice among the hospital staff.

MATERIAL & METHOD

We conducted a Questionnaire survey among the day shift hospital staff employed at the clinical settings like nurses, doctors, technicians etc. to gather information from them regarding the knowledge, attitude and practice of Universal Precautions at a leading private Hospital, Vadodara. The ethical approval was obtained from the Institutional Ethics Committee, Sumandeep Vidyapeeth, Vadodara (SVIEC/OW/MBA/RP/16005) prior to the research. The data was collected by filling of the close ended questionnaire which was developed by referring guidelines for ***Isolation precautions: Preventing transmission of infectious agents in health care setting*** **2007** developed in reference to Siegel et al. Expert opinions for content validity were obtained from the various supervisors of the different wards of sterling hospital. The results of the questionnaire were used to check the internal consistency. The value for cronbach's alpha is 0.65 making the study reliable to perform.

The questions were designed to cover different aspects of standard and transmission based-precautions. The questionnaire was divided into four parts. The first part asked about socio-demographic, current working unit of the respondents and the years of experience and if they had earlier had any training in the subject, the second about knowledge regarding the standard precautions by selecting the correct option, the third part consisted of statements to assess the attitude towards practicing of standard precautions and the fourth part consisted of statements that assessed the frequency of practice among the respondents.

The whole population which included were all the day shift doctors, nurses and technicians etc. of general ward, ICCU, MICU, SICU, NICU, CCU, burns ward, renal transplant wing etc. Out of 150 questionnaires distributed, only 125 were returned. Out of 125, 25 were discarded because of incomplete information.

KAP was assessed by 28 questions and statements hand washing, PPE, medical sharps disposal and medical waste management. Knowledge was assessed through self administered questionnaires and obtained scores were classified into three groups (high, moderate and low level of knowledge). Respondents who scored more than 80% of correct answers were classified as high group. Respondents who had 61-79% of correct answers were classified as moderate level group. Respondents with less than 60% of correct answers were classified as low level group. Likert's scale was applied to measure the attitude. All individual answers were computed to obtain total scores and calculated for means.

Table 1: describes the mean score which were used to divide the participants into three groups that were positive group, neutral group and negative group.

4-5 = Highly Positive	Positive
3 - 4 = Positive	
2- 3 = Moderate	Moderate
1-2 = Negative	Negative
0 -1 = Highly Negative	

Methods and frequency of infection control practices were determined by rating statements from 1-5 (1 never, 2 seldom, 3 sometimes, 4 often, and 5 very often).

Table 2: shows the mean score that were used to divide the participants into three groups that were positive group, neutral group and negative group.

4-5 = Highest level of practice	Positive
3 - 4 = Good level of Practice	
2- 3 = Moderate level of practice	Moderate
1-2 = Negative	Negative
0 -1 = Highly Negative	

The data was analyzed using SPSS version 20 for testing the level of knowledge, attitude and practice and also to test the association among all.

RESULTS

The questionnaire was distributed among 150 staff, out of which 100 were accepted, 27 were rejected due to incomplete filling of the questionnaire and the remaining was not received making the response rate 84.66%.

Out of 100 respondents, 49 were males and 51 were females. Among these 25% were from MICU & SICU, 20% from NICU, 15% from ICCU, 10% each from general ward, burns ward, CCU and renal transplant wing.

Table 3: Shows the number of hospital staff with correct and incorrect responses to the questions in the Knowledge part

Statements	Number of Correct Response	Number of Incorrect Response
Standard precaution is	85	15
One of the main aims of standard precaution is	71	29
Which of the following statement is incorrect?	85	15
Select the best practice from the following	91	9
If you puncture hand with sharp instruments, immediately	78	22
Select the correct statement from the following	62	38
Choose inappropriate statement from the following	79	21
Transmission - based precautions are required	35	65
In transmission-based precaution, respiratory protection requires	76	24
Which of the following patients should be kept in a single room in order to prevent spreading infection to others?	75	25

Table 3 shows the level of knowledge among the hospital staff. It can be seen that maximum number of people having correct response is 91% regarding the basic concept of universal precautions while only 24% of the respondent gave correct answer when asked regarding the transmission based precaution for respiratory problems

Table 4:Showing the percentage of individuals with different level of attitude:

Level of Attitude	Percentage of individuals
Positive	**93%**
Moderate	**7%**

Table 4 shows the level of attitude among the hospital spectrum. Out of the 100 respondents, the doctors and nurses with a positive attitude constituted 93% while remaining 7% had a moderate attitude towards the universal precautions practice and none had the negative attitude.

Table 5: Table showing the level of practice by the hospital staff spectrum

LEVEL OF PRACTICE	PERCENTAGE OF PRACTICE
High practice	96%
Moderate practice	4%

Table 5 shows the level of practice by the doctors and nurses of the hospital staff.96% of the doctors and nurses show high level of practice while only 4% show a moderate level of practice.

Table 6: Table showing the correlation between knowledge, attitude and practice of hospital staff spectrum

		Know-ledge	Attitude	Practice
Knowledge	Pearson Correlation	1	-.096	.133
	Sig. (2-tailed)		.004	.001
	N	100	100	100
Attitude	Pearson Correlation	-.096	1	.005
	Sig. (2-tailed)	.004		.003
	N	100	100	100
Practice	Pearson Correlation	.133	.005	1
	Sig. (2-tailed)	.001	.003	
	N	100	100	100

The table 6 depicts that knowledge and attitude are negatively correlated. It shows that 100% change in knowledge causes 9.6% change in attitude while the sign shows that they are inversely related. The correlation between attitude and practice is very low, 0.5%, that means that 100% change in attitude leads to 0.5% change in practice of universal precautions. The correlation between knowledge and practice is 13.3%, that is that 100% change in knowledge would cause 13.3% change in practice of universal precautions. The association among knowledge, attitude and practice of universal precautions is highly significant ($p<0.005$).

DISCUSSION

Universal blood and body fluid precautions (UPs) are very vital measures that prevent health workers from being occupationally infected. At present its knowledge is being aggressively disseminated by health authorities and it has been integrated into the curriculum also.

Okaro A O, Eze C U et al 2010 used an index to assess the awareness of radiographers about universal blood and body fluid precautions. 20.8% of radiographers knew about universal precautions through books, 8.4% (n=2) knew through someone, 58.3% (n=14) through seminar/ symposium, while 12.5% (n=3) knew through mass media. Only 37.5% (n=9) was against recapping of needles and 29.2% (n=7) rated their knowledge very good. 45.8% (n=11) of the radiographers have received occupational training on UPs. The attitude radiographers towards patients with blood and body fluid-borne pathogens were positive. [4]**Sari Y I et al 2011** suggested tailor made interventions were needed to improve adherence to universal precautions. They indicated that the level of knowledge regarding hand washing, personal protective equipment, medical waste disposal and post exposure prophylaxis was high while level of knowledge regarding instrument processing and medical sharps disposal was low.[5]

Vaz k et al 2010 concluded adequate knowledge and a fair level of awareness among medical doctors, medical technologists, and nurses towards universal precautions at the university hospital of West Indies, Jamaica.[2] **Siddique K et al 2008** revealed inadequate knowledge amongst health care workers about the risk associated with needle-stick injuries and lack of use of preventive measures at holy family hospital, Rawalpindi, Pakistan.[1]

This study showed that the level of knowledge among the health care workers is highest regarding the concept of standard precautions like the basic idea, aim, and best practice for following of standard precautions while it was seen that they had lowest level of knowledge (35%) regarding the transmission based precautions. Also it was seen that they lacked knowledge on the current advancements in the field

of standard precautions. The maximum number of respondents (93%) had positive attitude and high level (96%) of practice towards universal precautions. The association among knowledge, attitude and practice is highly significant though it is seen that knowledge and practice are positively associated towards each other.

The recommendations for the future on the subject are that more awareness on current advancements should be done by arranging more clinical activities and regular training programmes and strengthening the current system of infection control measures and increased surveillance and control should be made to keep abreast with the new and latest advancements. The most likely means of transmission of blood borne pathogens is direct percutaneous inoculation of infected blood/body fluid. Thus, healthcare workers

LIMITATIONS

- The study is questionnaire and filling of questionnaire by staff can be questioned if they have filled the questionnaire sincerely or not.

- Some of the questionnaires were not returned both by doctors and nurses.

- Instead of self reporting questionnaires, a strong design such as in-depth qualitative study would be more accurate and informative should routinely use appropriate barrier method to prevent contamination.

CONCLUSION

The hospital staff that was included in the study is mainly the nurses and doctors who work in the clinical setting. It was observed that the highest number of respondents who chose the correct response for the questions highlighting the basic concept of universal precautions, indicating that the staff is well equipped with the knowledge regarding the concept of universal precautions while the least number of correct response was seen in the question that highlighted the knowledge regarding the advancement in the universal precautions. The maximum number of hospital staff has the positive attitude towards universal precautions and similarly the maximum number of staff that is 96% has a high level of practice regarding the universal precautions. This shows that the staff spectrum which works in the clinical setting are following the high level of practice of universal precautions while a meager 4% has a good level of practice and there is no respondent in the study that has either the low level of attitude or the low level of practice of universal precautions. There is an association between the knowledge, attitude and practice of universal precautions.

Acknowledgement: The authors would like to thank Sterling Hospital for providing a conducive and supportive environment for the smooth conduction of the study.

Conflict of Interest: Nil

Source of Funding: The study was performed on self funds; No support was taken from any organization.

REFERENCES

1. Siddique K, Mirza S, Tauqir SF , Anwar I , Malik AZ. (2008) Knowledge attitude and practices regarding needle stick injuries amongst healthcare providers. Pakistan Journal of surgery; 24(8):242-48.
2. Vaz K et al. (2010) Knowledge, Awareness and Compliance with Universal Precautions among Health Care Workers at the University Hospital of the West Indies, Jamaica. IJOEM; 4(1) :171-80.
3. Kaur R, Kaur B, Walia I. (2008). Knowledge, Attitude and Practice Regarding Universal Precautions among Nursing Students. Nursing and Midwifery Research Journal; 4(4) :115-27.
4. Mukti AG et. (2000). A universal precautions education intervention for health workers in sardjito and pku hospital Indonesia. Southeast Asian J Trop Med Public Health; 31(2):405-12.
5. Sari SYI et al. (2011). Knowledge, attitude and perceived adherence with universal precautions among health care workers in the obstetrics and gynaecology department of an Indonesian teaching hospital. International Journal of Infection Control ; 7(14): 1-6.
6. Watkins R .E, Wynaden D, Hart, L., Lansborough I, Mc Gowan S., Speed G., et al. (2008).Perceptions of infection control practices among health professionals. Cotemporary Nurse. 22(1), 109 – 119.

7. Yassi, A., Lockhart, K., Corps, R., Kerr, M., Corbiere, M., & Bryce, E. A., et al.(2007)Determinants of Healthcare Workers' Compliance with Infection Control Procedures.Healthcare Quarterly. 10(1), 44-52.

8. Vanagas, G., Bihari-Excelson, S., & Vanagiene, V. (2004). Do age, gender and marital status influence job strain development for general practitioner. Medicina (Kaunas) 40(10), 1014-8.

9. World Health Organization [WHO]. (2008). The first Global Patient safety challenge:"Clean care is safer care". Geniva: WHO

10. Juni, B. (2003). Evidence and Information for National Injection Safety Policies *at* http:// pages.unibas.ch/diss/2003/DissB_6912.pdf

11. Kristi, F. J., Howard, W., Susan, B. E., & Bradly, N. (2004). Critical incidents of nonadherence with standard precautions guidelines among community hospital-based health care workers. Journal of General Internal medicine. 19(7), 726 – 731.

12. Limros, T. (2005). Province Preventive behaviors against dengue infection among family health leaders in Konkrailat District, Sukhothai. Master's thesis, College of Public Health, Chulalongkorn University.

13. Garner, J. S. & The Hospital Infection Control Practices Advisory Committee. (1996). Guidelines for Isolation Precautions in Hospitals Retrieved from http://mwars.org/Documents/ gl_isolation.pdf

14. Hauri, A.M, Armstrong, G.L, & Hutin, Y.J.F. (2004). The global burden of disease attributable to contaminated injections given in health care settings. International Journal of STD & AIDS. 15(1), 7-16.

15. Danchaivijitr, S., Supchutikul, A., Waitayapiches S, & Kachintorn, K. (2005). Quality of nosocomial infection control in Thailand. Thailand: Journal of medical association of Thailand. 88 (10), 145-149

DOI Number: 10.5958/0974-9357.2016.00111.2

Perceptions of School Teachers Regarding Nutritional Status and Dietary Practices among School Going Children in Selected Rural School, Bhubaneswar

Dharitri Swain

Assistant Professor, College of Nursing, All India Institute of Medical Sciences (AIIMS), Bhubaneswar, Sijua, P.O: Dumduma, Dist: Khurda, Odisha

ABSTRACT

The nutritional status of the children determines the future productivity of our human Resources. School children are important group because they often form right proportion of population. Balanced and sufficient nutritional intake is most essential for children to promote optimal growth and development, to protect and maintain health, to prevent nutritional deficiencies and various illnesses to reserve for starvation and dietary stress. In state Odisha childhood malnutrition is still a public health concern affecting both children and adolescents. However, school-age children are not always included in national surveys.The nutritional status of children is a good indicator of health status of a community. Identification of nutritional deficiency is very important to promote growth and development and also to improve the health status of the children. **Objectives** of study were to determine the nutritional status and dietary habits of school going children of age group 6-12 years and associated socio-economic factors and teacher's perception for abnormal nutritional status. **Result** shows the overall prevalence of underweight was 34.16%, overweight 30.83%, obese 7.5% and 27.5% were normal in the studied school children. Nutritional deficiency among school children (6-12 years) were 53.33% dental caries, 11.66% skin problems, 10% pallor, 6.66% with koilonychias, 5.83% loss of hair lustres 4.16% conjuctival xerosis and 3.33% bitos spot. Dietary habits depict 32% had good dietary habits and maximum (68%) had poor dietary habits. The main reason expressed by school teacher was socio-economic status of family, illiterate parents and food habit at home of children. **Conclusion:** Hence study suggests regular nutritional awareness programme among parents and teacher must be added in the school policy for better control of dietary patterns of school children.

Keywords: *Nutritional status, Nutritional deficiency, Dietary patterns, Teacher's Perception.*

BACKGROUND

World health organization defined nutrition as a science of food and its relationship to health. Good nutrition means maintaining a nutritional status to grow well and enjoy good health. Nutritional status is the balance between the intake and utilization of food nutrients by man in the process of growth and development and it is an integral component of the overall health of an individual and provides an indicator of the well-being of children living in a particular region[1]. The nutritional status of the children determines the future productivity of our human Resources[2]. School children are important group because they often form right proportion of population. The child spends most of the time in school. About 30% of population is rendered through school system.[3]

India is the one of the largest developing countries of the world. It constitutes of around 20% of school going children. The future of the country rests in the children who will become future citizen and leads of tomorrow. There are approximately three million children are attending school in the age group 5-11 years and about 2.2 million children are attending school in the age group 12-16 years. Out of this 53% of girls and 47% of boys.[4]

Inadequate nutrient intake during childhood

leads to under nutrition, which results in decreased cognitive function, growth failure, greater developmental delays, and diminished resistance to infection and reduced adult size, leading to decreased economic productivity[5].

In state Odisha childhood malnutrition is still a public health concern affecting both children and adolescents. However, school-age children are not always included in national surveys.The nutritional status of children is a good indicator of health status of a community[6]. Nutritional status is defined as a measurement of the extent to which an individual's physiologic need for nutrients is being met [4]. Assessment of nutritional status of an individual involves biochemical tests, clinical observations, diet history and anthropometric data[3]. The three most often used anthropometric indices are weight-for- height, height-for-age, and weight-for-age. Values which fall below the 5th percentile range give indication of wasting, stunting and underweight, respectively[7].

Identification of nutritional deficiency is very important to promote growth and development and also to improve the health status of the children. School plays a vital role in building the health, knowledge and skills for their students. Lack of awareness among school teachers about nutritional deficiency can leads to delayed management and further complications.[8]

Hence the investigator felt the need to assess nutritional status of school going children in a upper primary school and identify the nutritional deficiency among them, to determine the socio-economic factors associated with poor nutritional status of the children and the perception of school teacher so that teachers can motivate parents for healthy nutrition for their children.

STUDY OBJECTIVES

1. To assess the nutritional status among school children of age group 6-12 years

2. To identify the nutritional deficiency among school going children of age group 6-12 years.

3. To find out dietary patterns of school going children of age group 6-12 years.

4. To find out the association between nutritional status with selected socio-economic factors.

5. To determine teacher's perception towards poor nutritional status and faulty dietary habits of school going children.

MATERIAL & METHOD

i) Study design and sampling procedure

Descriptive, cross-sectional study was conducted two U.P schools located in rural area of Mendhasala, khorda district, Odisha. Upper primary children were selected since they were more mature and follow the instructions to complete the questionnaire. A total of 120 students were randomly selected from two schools. In each school, sixty students were chosen randomly, twenty from each of the three upper primary standards (4, 5, and 6). The total sample size was 120. Cross- sectional study design was used to assess the nutritional status of school going children of age group 6-12 years.

ii) Instrument Description

A demographic Performa was used to assess socio-economic factors. Anthropometric measurement tool such as weight machine, measuring tape and measuring scale was used for growth assessment. A structured in-depth interview schedule, which was administered to individual child to find out the dietary habits and eating pattern. Perception of school teachers were assessed by administering agreement statement questionnaire. Informational leaflet was distributed for educational awareness of school teachers and parents.

iii) Data Collection Procedure

The data was collected by physical examining interviewing each child with the help of class teacher. The nutritional status of children was done by clinical examination and by measuring height (cm), weight (kg). CDC charts were used as reference for determining the anthropometric measurement. Growth charts for boys and girls containing standard growth curves and those denoted as percentiles given by ICMR (Indian Council of Medical Research) were used to determine BMI-for-age and stature-for-age.

During measurement, children were asked to

remove their shoes and excessive clothing and to stand in an erect position so as to minimize errors in the measurements recorded. Weight was measured using a floor type weighing scale with due respect to the standardization of the equipment and procedure. The measurements are taken to the nearest 0.5 Kg. A measuring tape was applied to the wall to measure the height with their back of heels, buttocks and head touching the wall. Readings are taken to the nearest 0.5 cm. Clinical examination was done to identify important nutritional problems among children

FINDINGS

1) Analysis of Socio-Demographic Characteristics of children

A total of 120 children were studied belonging to the age group 6 to 12 years. According to sex distribution 56(46.6%) were boys and 64(53.3%) were girls.Based on age distribution,14(11.6%) were in the age group of 6 to<7 years, 20(16.6%) were in the age group of 7 to<8 years, 28(23.3%) were belonging to 8 to<9 years, 24(20%) were belonging to 9 to <10 years, 21(17.5%) were in the age group of 10 to<11 years and 13(10.8%) were belonging to 11 to <12 year's age group (Figure 1).

The majority (85%) of respondents were from Hindu religion and fifty two respondents (43.32%) were in the birth order of three and more. Based on the level of education of parents 10% were Illiterate father and 32.5% were Illiterate mother and maximum mother were (73.33%) house wife and 53(44.16%) father were farmer, the remaining 40(33.33%) were self-employed in business and other different types of work. Maximum of the children 92(76.66%) had 6-9 no of family members and 66(55%) had 3 and more children in their family.

2) Analysis of BMI, Weight and Height status

a) Analysis of nutritional status according to weight

The overall prevalence of underweight was 41(34.16%), overweight 37(30.83%), obese 9(7.5%) and 33(27.5%) were normal in the studied school children.

The prevalence of underweight was more among boys compared to girls. Among the boys underweight was seen more commonly in the age group 6-7 years (27.2%) and among girls in 10-11 year age group (26.3%). The overall prevalence of overweight in the studied school children was 37(30.83%). The prevalence of overweight in boys was 22(56.75%) and 16(43.24%) in the girls. The prevalence of overweight was more among boys compared to girls. Among the boys overweight was seen more commonly in the age group 6-7 years (42.8%) and among girls in 11-12 year age group (25%). The overall prevalence of obese was found among only boys (7.5 %).

b) Analysis of nutritional status according to Height

The overall prevalence of shunting among children was 4 (3.33%)), tall 12(10 %)) and 104(86.66 %) were in normal height. The prevalence of stunting in boys was 74(29.1%) while in girls it was 61(26.5%). The prevalence of stunting was more in boys as compared to girls (29.1% vs 26.5%). Among both boys and girls, stunting was noted more commonly in the age group 11-12 years with 34% in boys and 29.2% in girls.

3) Analysis of Nutritional deficiency among children

The overall prevalence of dental caries was 64(53.33%) and it was most common among 6-7 years age group 39(32.5%), 14(11.66%) had complained skin problems, 12(10%) were found pallor and 8(6.66%) with koilonychias. Also loss of hair lustres was seen among 7(5.83%) children and 5(4.16%) manifested conjuctival xerosis and 4(3.33%) bitos spot.

4) Socio-economic determinants of child nutrition.

The majority of the children examined had a normal weight for height. But both problems of underweight and overweight were prevalent among the children. More children were found to be underweight (53.65% boys, 46.34% girls) than overweight or obese (14.2% boys, 25% girls). Gender was not significantly associated ($p>0.05$) with nutritional status. Education of mother, working mother, socio-economic status of family and more no of children in the family were significantly associated with poor nutritional status of children ($p<0.05$).

5) Eating patterns of school children

Distribution of samples according to dietary habits depicts 32% had good dietary habits and remaining 68% had poor dietary habits. The most common snacks brought to school were found to be unhealthy foods, such as junk foods (61.66%) fast foods (54.16%), chips and fried items (66.66%) sweets (48.33%). Only a small % of children brought healthy snacks such as dairy product (18.33%), fresh fruits(10.83%).

A positive finding has been observed regarding packed lunches; most 111(92.5%) of children brought their lunch box to school. The most popular energy giving food at lunch time was found to be cake 76(63.33%) and bread 73(60.83%) and maximum children obtained their protein sources at lunch time from eggs 98(81.66%), poultry 56(46.66%), red meat 49(40.83%), burgers 54(45%), cereals 52 (43.3%) and canned fish 41(34.16%). Cheap sources of protein was obtained from egg and less percentage of children reported plant-based protein sources such as soya chunks9(7.5%).The most common beverages consumed by the children were diluted syrup, soft drinks and water. It was reported by children, the most common and high energy consuming food at dinner was rice (82.5%) and along with that food product like pulses, fish, eggs, meat, and poultry were more commonly used at dinner than in lunch.

6) Perception of school teacher regarding poor nutrition and dietary practices

Various agreement statements were administered to school teachers about faulty eating pattern and food habits of children. The main reason for poor nutritional status agreed by them was low socio-economic status of family, illiterate parents and lack of awareness among teacher and parents about nutritious food for children. Other important reasons for faulty dietary habits of children shared were advertisement and availability of junk foods and soft drinks, food habit at home, inadequate knowledge of parents and teachers, working mother etc. Maximum teachers added that unavailability of regular physical check up and screening facility in the school and nutritional education training facility in the school through exhibition for motivation of children were the important cause for both poor nutritional status and unhealthy food habits of young children.

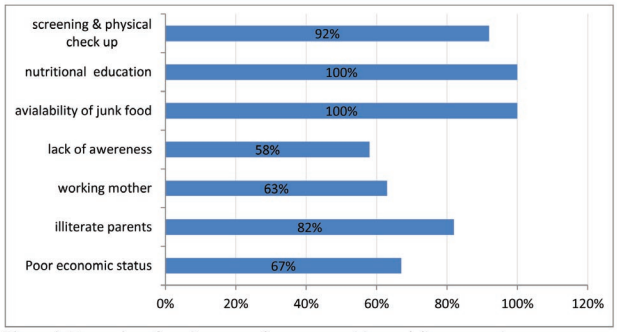


Figure 1: Perception of teachers regarding poor nutrition and dietary practice

CONCLUSION & DISCUSSION

This study was conducted to assess the nutritional status among 120 school going children belonging to the age group 6 to 12 years in Shyampur U.P school. The overall prevalence of underweight was 34.16%, overweight 30.83% , obese 7.5% and 27.5% were normal in the studied school children. The prevalence of stunting in boys was 29.1% while in girls it was 26.5%. Similar study conducted at Kaski district , Nepal among 786 students(4-14 years) reveals that 26% of the students were found to be undernourished and 13% stunted, 12% wasted and only 1% both stunted and wasted[9]. Another study was conducted to assess the level of wasting, stunting, and underweight and determine its associates among slum children of 3–9 years of age, residing in Bhubaneswar city, India. It was found 23.3% wasting, 57.4% stunting, and 45.4% of children were underweight.[10]

Nutritional problems among school children 6-12 years in the present study found that overall prevalence of dental caries was 64(53.33%)and it was most common among 6-7 years age group 39(32.5%) , 14(11.66%) had complained skin problems, 12(10%) were found pallor and 8(6.66%) with koilonychias. Also loss of hair lustres was seen among 7(5.83%) children and 5(4.16%) manifested conjuctival xerosis and 4(3.33%) bitos spot. A study conducted in Pondicherry reported a prevalence of dental caries of 44.4% in 5 years age group and 22.3% in 12 years age group[11]. Another study conducted among school going children (6-15 years) in Kolar district of Karnataka to determine prevalence of ocular morbidity reveals that Vitamin A deficiency was the commonest ocular morbidity (33.8%) which manifested as bitot spots and conjunctival xerosis.[12]

Distribution of samples according to dietary habits in relation to frequent intake of type of food, no of meals per day, water intake and hand washing practices depicts 32% had good dietary habits and remaining 68% had poor dietary habits. Similar study on nutritional status of school children aged 8-12 years reveals the most commonly consumed food commodities being bread, margarine, cheese, jam and tea; milk, yoghurt, fruits or fruit juice were rarely consumed.[13]

Acknowledgement: I would like to thank all the experts for guiding my research work. I also extend my heartfelt thanks to B.Sc nursing students for their physical help throughout my study. Also I acknowledge cooperation of school headmaster and all class teachers of the school. I thank to school children who made my study fruitful one.

Conflict of Interest- None

Source of Funding- Self funding

Ethical Clearance- Ethical consideration had obtained by taking written permission from the authority of the school and informed consent was obtained from the study samples for participating in the research.

REFERENCES

1. The World Oral Health Report 2003 Continuous improvement of oral health in the 21st century – the approach of the WHO Global Oral Health Programme. WHO/NMH/NPH/ORH/03.2
2. Adegun J.A, Ajayi-Vincent O.B, and Alebiosu E.O. Differences in the nutritional status of young school children from public and private owned primary schools in Ekiti state, Nigeria. European Scientific Journal. 2013;9(7):
3. Goon, T.D, Toriola L.A, Shaw S.B, Amusa O. L, Monyeki A.M, Akinyemi O. and Alabi, A.O. anthropometrically determined nutritional status of urban primary school children in Makurdi, Nigeria. BMC Public Health. 2011;11: 769.
4. K. Park, Park's Textbook of Preventive and Social Medicine, M/S Banarasidas Bhanot, Jabalpur, India, 22nd edition, 2013.
5. O. P. Ghai, V. K. Paul, and A. Bagga, Nutrition, Ghai Essential Pediatrics, CBS, New Delhi, India, 7th edition, 2009.
5. Food and agriculture organization (FAO) of the United Nations (2006). The double burden of malnutrition. WHO technical report series 916. FAO publication, 1- 20.
6. M. Sri Gajapathy Sarma, D.G.N.G Wijesinghe1* and T. Sivananthawerl2.The Effects of Nutritional Status on Educational Performance of Primary School Children in the Plantation Sector in Nuwara Eliya Educational Zone. Tropical Agricultural Research.2013; 24 (3): 203 – 214.
7. Fazili A, Mir A, Pandit IM et al. Nutritional Status of School Age Children (5-14 years) in a Rural Health Block of North India (Kashmir) Using WHO Z-Score System. Online Journal of Health and Allied Sciences. 2012; 11:1-3.
8. Vandana Sati, Saroj Dahiya. Nutritional Assessment of Rural School-Going Children (7-9 Years) of Hisar District, Haryana. Open Access Scientific Reports. 2012; 1.
9. 14. Joshi HS*, Gupta R**, Joshi M C***, Mahajan Vipul on Determinants of Nutritional Status of School Children - A Cross Sectional Study in the Western Region of Nepal. NJIRM 2011; 2(1):10-15.
10. Ansuman Panigrahi and Sai Chandan Das.Undernutrition and Its Correlates among Children of 3–9 Years of Age Residing in Slum Areas of Bhubaneswar, India. The Scientific World Journal Volume 2014; Article ID 719673, 9
11. Saravanan S, Anuradha KP, Bhaskar DJ. Prevalence of dental caries and treatment needs among school going children of Pondicherry, India. J Indian Soc Pedod Prev Dent. 2003; 21 (1): 1-12.
12. Kamath P, Guru Prasad BS, Deepthi R, Muninrayana C. Prevalence of ocular morbidity among school going children (6-15 years) in rural area of Karnataka, South India. Int J Pharm Biomed Res. 2012;3 (4):209-212.
13. Aurisinkala-Appadoo S1, Oogarah-Pratap B2 and A Ruggoo3* Nutritional status of school children aged 8-12 years in deprived areas of Mauritius, African journal of food , agriculture, nutrition, and development; 2013:13(4):77-90.

DOI Number: 10.5958/0974-9357.2016.00086.6

Effectiveness of Self Instructional Module Regarding Prevention of Puerperal Sepsis Related to Practice of the Post Natal Mothers

Jinu K Rajan

Assistant Professor, Majmaah University, Kingdom of Saudi Arabia

ABSTRACT

Introduction: Puerperium is the period following childbirth during which the bodies tissues, specially the pelvic organs revert back approximately to the pre pregnant state both anatomically and physiologically. Puerperium begins as soon as the placenta is expelled and lasts for approximately 6 weeks when the uterus becomes regressed almost to the non-pregnant size[2] (Dutta .D.C, 1997).

Pregnancy and childbirth are normal physiological process and outcomes of the pregnancies are mostly good. However, a few pregnancies and childbirth expose mothers at risk. Puerperal sepsis or pyrexia is one of the risks, which will develop after delivery, which is often, and unpredictable. Puerperal pyrexia or infection pregnant women need obstetric care to manage this complication[1]. (Gulani. K. K, 2005).

Objectives: 1. To assess the existing knowledge related to practice of post natal mothers regarding prevention of puerperal sepsis.

2. To assess the post test knowledge related to practice of postnatal mothers regarding prevention of puerperal sepsis.

3. To compare the pre and post test of knowledge scores related to practice of postnatal mothers regarding prevention of puerperal sepsis.

4. To find out the association between the knowledge related to practice score of postnatal mothers after intervention of SIM with their selected demographic variables.

Method: Pretest was conducted to the postnatal mothers who were in postnatal ward at index medical college hospital, Indore by using closed ended questionnaire to assess the knowledge on practice on prevention of puerperal sepsis. The researcher introduced himself and explained the purpose of his study and then distributed the questionnaire to the mothers and after 30 minutes the questionnaire was collected together.

Post-test was administered for the samples by using closed ended questionnaire after seven days of implementation of SIM.

Results: Prior to implementation of SIM mothers had poor knowledge (35.63%) regarding meaning, factors, care during puerperium and complication. After implementation of SIM mothers had good knowledge (75.84%) regarding prevention of puerperal sepsis and difference in mean percentage was 40.21% this shows the effectiveness of SIM.

Highly significant difference was found between pre test and post test knowledge related to practice scores of mothers in all areas of prevention of puerperal sepsis. There was significant association between knowledge related to practice with demographic variables such as occupation and type of family.

Keywords: *Assess, Effectiveness, Self instructional module, Knowledge related to practice, postnatal mothers, Puerperal sepsis.*

Corresponding author:
Jinu K Rajan
Email:jinukrajan@rediffmail.com
Mobile 9846192574

INTRODUCTION

Motherhood is a distinct bio-psychosocial process that transforms and broadens the role of a woman

into that of a mother. Puerperium is a period, where the experiences are intense physical and emotional stress due to exhaustion, anxiety and excitement. Each mother has to adjust the physical changes in her own body due to involution and lactation as well as puerperal complication mainly puerperal infection, bleeding, eclampsia etc. Puerperal infection causes a number of distressing conditions into post natal women. [3]

MATERIAL & METHOD

Research Approach: The present study was in quasi experimental design where the pre and post test without control group approach was used to assess the effectiveness of self instructional module regarding knowledge on practice of postnatal mothers in preventing puerperal sepsis in a selected hospital, Indore.

Research design :

X O Y = E

The study symbols used were explained as follows:

X - Postnatal mothers regarding their knowledge related to practice about prevention of puerperal sepsis by using closed ended questionnaire before implementing SIM.

O - Self Instructional Module (SIM) on prevention of puerperal sepsis.

Y - Postnatal mothers regarding their knowledge related to practice about prevention of puerperal sepsis by using closed ended questionnaire after implementing SIM.

E - Effectiveness of the Self Instructional Module.

Setting

The study was conducted in Index Medical College Hospital, Indore. Which is located in the centre of Madhya Pradesh. It is multi specialized hospital providing both inpatient and outpatient services for general medical surgical, pediatric and maternity.

Population

The population was postnatal mothers (first six weeks after delivery) in Index Medical College Hospital, Indore.

Sample

The sample size comprises of about 50 postnatal mothers, who were present during the period of data collection.

Sampling technique

Purposive sampling technique was used for selecting the postnatal mothers.

Sampling criteria

Inclusion criteria

- Postnatal mothers who were
- present during the period of data collection
- willing to participate in the study
- able to read and write Tamil

Exclusion criteria

- Who are not willing to participate in the study.

FINDINGS

I. Description of the postnatal mothers according to their demographic variables

The Majority(66%) of the post natal mothers were in the age group of 21 – 25 years belonging to Hindu (86%) religion who did their high school education (28%) with an monthly income of >Rs. 3000 (36%). Majority (62%) of the mothers were residing in rural area.

II. Assessment of knowledge scores related to practice of the postnatal mothers regarding prevention of puerperal sepsis prior to implementation of SIM

Table No- 1: Area wise distribution of mean, SD and mean percentage of pre test knowledge scores related to practice of the postnatal mothers regarding prevention of puerperal sepsis

Areas	Max scores	Pretest knowledge related to practice scores		
		Mean	SD	Mean %
Meaning of puerperium	2	0.56	0.76	28
Meaning of puerperal sepsis	3	0.92	0.88	30.67
Factors related to puerperal sepsis	3	0.92	1.05	30.67
Care during puerperium to prevent puerperal sepsis	29	10.68	5.83	36.83
Complications	1	0.46	0.50	46
Overall	38	13.54	7.10	35.63

Prior to implementation of SIM, the mothers had poor knowledge related to practice on prevention of puerperal sepsis (Mean percentage score was 35.63%).

The overall mean score was 13.54 ± 7.10 which is 35.63% of the total score revealing that the postnatal mothers had poor knowledge related to practice on prevention of puerperal sepsis (Table No- 1).

III. Assessment of knowledge scores related to practice of the postnatal mothers regarding prevention of puerperal sepsis after implementation of SIM

To assess the effectiveness of SIM on knowledge scores related to practice of the postnatal mothers regarding prevention of puerperal sepsis the formula Y-X were used, in which Y-post test, X- pre test and E –effectiveness. The findings are presented as follows:

Table No- 2: Area wise comparison of mean, SD and mean percentage of pre and post test knowledge scores related to practice of the postnatal mothers regarding prevention of puerperal sepsis

Areas	Max score	Knowledge scores related to practice						
		Pre test scores			Post test scores			Difference in mean %
		Mean	SD	Mean %	Mean	SD	Mean %	
Meaning of puerperium	2	0.56	0.76	28	1.48	0.65	74	46
Meaning of puerperal sepsis	3	0.92	0.88	30.67	2.10	0.81	70	39.33
Factors related to puerperal sepsis	3	0.92	1.05	30.67	1.98	0.98	66	35.33
Care during puerperium	29	10.68	5.83	36.83	22.38	4.84	77.17	40.34
Complications	1	0.46	0.50	46	0.88	0.33	88	42
Overall	38	13.54	7.10	35.63	28.82	6.01	75.84	40.21

Area wise comparison of mean, SD and mean percentage of pre and post test knowledge scores related to practice of the postnatal mothers regarding prevention of puerperal sepsis shows that during pre test the highest mean score (0.46 ± 0.50) which is 46% of the total score was obtained for the area of "complication of puerperal sepsis". However, the maximum score was only one. The lowest mean score (0.56 ± 76) which is 28% of the total score was obtained for the area "meaning of puerperium". Whereas, in post test it shows that highest mean score (0.88 ± 0.33) which is 88% of the total score was obtained for the area "complication of puerperal sepsis" where the maximum score was only one.

The difference in mean percentage shows highest effectiveness (46%) for the area "meaning of puerperium" where the pretest score was lowest (28%) and the lowest effectiveness (35.33%) for the area "factors related to puerperal sepsis" where the post test score was lowest (66%). When compared to pre test scores the effectiveness of SIM vary from 35.33% to 46% (Table No- 2).

III. Item wise comparison of pre and post test knowledge scores related to practice of the postnatal mothers regarding of prevention of puerperal sepsis

Table No- 3: Item wise comparison of pre and post test knowledge scores related to practice of the postnatal mothers regarding meaning of puerperium

Item	% of correct responses		Effectiveness of SIM %(E=Y-X)
	Pre test(X)	Post test(Y)	
Puerperium means the women's body returns to pre-pregnant stage	30	66	36
First six weeks after child birth considered as puerperal period	26	82	56

Items wise comparison of pre and post test knowledge scores related to practice of the postnatal mothers regarding meaning of puerperium reveals that during pre test 30% of the mothers had correct knowledge about "puerperium means the women's body returns to pre-pregnant stage" whereas in post test 66% of them knew that. Further, 26% of them knew "the first six weeks after child birth considered as puerperal period" whereas, in post test most (82%) of them correctly responded for that.(Table No- 3).

Table 4 : Association between post test knowledge scores related to practice of post natal mothers regarding prevention of puerperal sepsis with their demographic variables

Demographic variables	df	Chi-square	Table value	Level of significance
Age	6	0.13	9.87	Not significant
Religion	6	0.52	5.12	Not significant
Education	12	0.56	10.63	Not significant
Occupation	12	0.003	29.76	Significant
Type of family	e3	0.037	8.49	Significant
Family income/capita /month	9	0.66	6.78	Not significant
Place of living	3	0.66	1.58	Not significant
No. of delivery	9	0.91	3.96	Not significant

P >0.005 Not significant, P< 0.005 Significant

Chi-square test was used to calculate the association between post test knowledge scores related to practice of the postnatal mothers on prevention of puerperal sepsis with their demographic variables .No significant association was found between knowledge scores related to practice of the postnatal mothers during post test, when compared to age, religion, education, Family income/capita /month, place of living and parity where as significant association between knowledge related to practice scores of the pos natal mother during post test, when compared to occupation and type of family. Hence it can be interpreted that the difference in mean score related to these demographic variables were not true difference except occupation and family type and only by chance and null hypothesis was accepted. (Table.4)

DISCUSSION / CONCLUSION

I. Description of the postnatal mother according to their demographic variables

Distribution of post natal mothers according to their age group depicts that majority (66%) of the postnatal mothers were in the age group of 21 – 25 years and 30% of them were in the age group of 26 – 30 years whereas, it is observed that percentage of mothers under study decreases with increase age. It may be related to the reproductive early marriage of Indian women [4]

II. Assessment of knowledge related to practice scores of the postnatal mothers regarding prevention of puerperal sepsis prior to implementation of SIM

Area wise pre test mean knowledge score

Area wise distribution of mean, SD and mean percentage of pretest of knowledge scores related to practice on puerperal sepsis among postnatal mothers shows that among five areas, the highest mean score (0.46 ± 0.50) which is 46% of the total score was obtained for the area "complication of puerperal sepsis". However the maximum score for this area is only one and the lowest mean score (0.56 ± 0.76) which is 28% of the total score was obtained for the area "meaning of puerperium". Similar mean score values was obtained meaning of puerperal sepsis (0.92 ± 0.88) and the "factors related to puerperal sepsis" (0.92 ± 1.05) which was 30.679% each. Further, overall mean score was 13.54 ± 7.10 which is 35.63% of the total score revealing that the postnatal mothers had poor knowledge related to practice on prevention of puerperal sepsis.

These findings were supported by Miller, B. C., B. Benson, et al. (2001).who stated that during postpartum period highest percentage of women had puerperal infection but they were not reporting that they had puerperal infection which might be due to lack of information regarding puerperal infection.[5]

III. Assessment of knowledge scores related to practice of the postnatal mothers regarding

prevention of puerperal sepsis after implementation of SIM

Area wise pre and post test mean score

Area wise comparison of mean, SD and mean percentage of pre and post test knowledge scores related to practice of the postnatal mothers regarding prevention of puerperal sepsis shows that during pre test the highest mean score (0.46 ± 0.50) which is 46% of the total score was obtained for the area of "complication of puerperal sepsis". However, the maximum score was only one. The lowest mean score (0.56 ± 76) which is 28% of the total score was obtained for the area "meaning of puerperium". Whereas, in post test it shows that highest mean score (0.88 ± 0.33) which is 88% of the total score was obtained for the area "complication of puerperal sepsis" where the maximum score was only one.

Comparison of mean, SD and mean percentage of pre test and post test knowledge scores related to practice of the postnatal mothers according to their occupational status shows that during pre test highest mean score (14.42 ± 7.75) which is 37.96% was obtained by the mothers who were housewives which was highest (79.11%) during post test also where the sample size was maximum (33). During pre test the lowest mean score (8 ± 6) which is 21.05% obtained by the mother who were government employee whereas, in post test the lowest mean score (19.50 ± 14.84) which is 51.32% was obtained by the mothers who were self employee where the sample size was less (2).

Comparison of mean, SD and mean percentage of pre test and post test knowledge scores related to practice of the postnatal mothers according to the type of family reveals that during pretest, higher mean score (14.22 ± 6.68) which is 37.43% was obtained by the mothers from joint family and the lower mean score (13.22 ± 82) which is 34.78% obtained by the mothers from nuclear family whereas, in post test higher mean score (29.85 ± 3.67) which is 78.56% was obtained bye the mothers from joint family and lower mean score (27.13 ± 8.27) which is 71.4% obtained bye the mothers from joint family.

IV. Testing Hypothesis

Difference between pre and post test knowledge related to practice scores of post natal mothers

Highly significant difference was found between the overall score values and area wise score value of pre and post test. Hence null hypothesis is rejected and it can be interpreted that the difference observed in the mean score value of the pre and post test score were true difference.

V. Association between post test knowledge scores of the post natal mothers with their demographic variables

No significant association was found between knowledge related to practice scores of the post natal mothers during post test, when compared to age, religion, education, Family income/capita /month, place of living and parity where as significant association between knowledge related to practice scores of the pos natal mother during post test, when compared to occupation and type of family. Hence it can be interpreted that the difference in mean score related to these demographic variables were not true difference except occupation and family type and only by chance and null hypothesis was accepted. It was contradictory to findings of Smaill F. and Hofmeyr F. G.J. (1999) reported that there was significant association found between age and parity.[6]

Acknowledgement: None

Conflict of Interest : None

Source of support: None

Ethical Clearance: The ethical clearance for the study was obtained from the Institutional review board (IRB) /Ethics committee/ Research Committee

REFERENCES

1. Gulani .K.K, (2005), "Community Health Nursing, 1st edition, Kumar Publishing House, Delhi, Pp. 102 – 106.
2. Dutta .D.C, (1997), "Text Book of Obstetrics", 3rd edition, New Central Books Agencies, India, pp. 50 – 54.
3. Noronha .J, 2003), "Teaching primi gravida womens about warning signs in pregnancy", Indian Journal of Nursing". Pp. 1 – 3.
4. Park K. 20th ed. Jabalpur, India: M/s Banarasidas Bhanot Publishers; 2009. Park's Text Book of Preventive and Social Medicine; p. 413..
5. Miller, B. C., B. Benson, et al. (2001).Family relationships and adolescent pregnancy risk: A research synthesis. Developmental Review 21: 1-38.
6. Smaill .F and Hofmeyr .G.Y, (1999), "Antibiotic Prophylaxis for Caesarean Section", The Chorchare Library, Issue 3, Oxford.

DOI Number: 10.5958/0974-9357.2016.00087.8

Utilization of MCH Services among the Postnatal Mothers in Selected Hilly Areas of Pauri District Uttarakhand

Priyanka Joshi[1], Gomathi Mahalingam[2], D Y Sorte[3]

[1]Nursing Tutor, Nancy College of Nursing, Nainital, Uttarakhand, India, [2]Assistant Professor, [3]Associate Professor, Himalayan College of Nursing, SRHU, Dehradun, Uttarakhand, India.

ABSTRACT

Background: World health organization estimates that more than half a million women lose their lives in the process of reproduction. Use of maternal health services is an effective means for reducing the risk of maternal morbidity and mortality, especially in places where the MCH services utilization was poor. **Aim & Objective:** The main objective of this study was to assess the utilization of MCH services among postnatal mothers in selected hilly areas of Uttarakhand. **Material and method**: The study has adopted exploratory descriptive design. The data was collected from 196 postnatal mothers within 42 days of postnatal period by administrating self structured questionnaire in selected community areas of Pauri District, Uttarakhand. Samples were selected by using convenient and consecutive sampling technique. **Results:** Majority of women sought at least one prenatal and one postnatal visit in health care providers during their recent pregnancy. The findings of study shows that approximately half (52.93%) of mothers utilized MCH services. Out of these services highly utilized MCH service was Janani Surkhsha Yojana cost benefits (82.7%) and institutional delivery (81.6%). The low utilized services by mothers were family planning services (18.36%).

Conclusions: This study demonstrated that utilization of maternal health services is inadequate in hilly area in general. The finding of this study will help the nurse-midwife who are working in community and hospital side to understand the utilization of MCH services and provides evidence to address women's problem for ensure effective utilization of available MCH services.

Keywords: *Maternal and child services (MCH), Antenatal care, Postnatal care (within 42 days after delivery), Mothers.*

INTRODUCTION

The female reproductive process through which a new baby is conceived, incubated and ultimately born into the world.[1] Every pregnant women hopes to give birth safely and healthy baby[2]. Complications in pregnancy can result from conditions that are specifically linked to the pregnant state as well as conditions that commonly arise or occur incidentally in women who are pregnant[3].

Corresponding author:
Gomathi Mahalingam
Assistant Professor, Himalayan College of Nursing, SRHU, Jolly Grant, Doiwala (Post) Dehradun, Uttarakhand, India, 248016,
Email: bgomathi@srhu.edu.in, gomathi84@gmail.com

Some time it will create life threatening condition for mothers as well as baby and increase maternal and child mortality rate. The incidence has shows that India contributes around 20 percent of global birth each years[4]. The finding of the study in India shows that 2001-2010, the mean maternal mortality rate in the study period was 302.23/100000 live births. Maximum maternal deaths (49.16%) were reported in the age group of 20 to 24 years. More deaths were reported in multifarious women (56.66%) as compared to Primiparas (43.33%) [5]. Government of India are provided MCH services before, during and after pregnancy in " safe motherhood package".

The use of maternal healthcare services is important for the early detection of mothers who are at a high risk of morbidity and mortality during

pregnancy. According to the finding of the study in uttarakhand 2011, women who delivered at govt. hospital (75.17%). Least percentage 29.21% women went for three or more ANC visits. Only 48.31% women consumed hundred IFA tablets and the proportion was high (79.41%) in rural women[6].

On the basis of findings of the study and record, it is suggested for achieving the national target in terms of MCH indicators more efforts are needed to improve the utilization of MCH services.

OBJECTIVES:- (1)To evaluate the utilization of maternal and Child Health services among postnatal mothers. (2)To find association between utilization of maternal and child health services and selected demographical characteristics of the postnatal mothers.

MATERIALS & METHOD

A explorative descriptive design was selected to carry out the study. The study sample comprised of all postnatal mothers within 42 days of postnatal period who attained MCH services selected in hilly areas Pauri District Uttarakhand from 21. Non probability convenient and consecutive sampling technique was used for the selection of 196 postnatal mothers who fulfilled inclusion criteria of the study. Postnatal mother with postnatal period within 42 days in the age group of 15-45, mother who can speak & understand Hindi, mothers who are willing to participate in the study included in the study and mother with diagnosis of any mental & chronic medical illness were excluded from my study. Tool used for the study were self structured questionnaire divided into two sections. In Section A: Socio demographical questionnaire, Section B: Structured checklist for utilization of MCH services.

RESULTS

Socio demographic data of the study participants

Demographic variables of sample revealed that 49% of mothers were in the age group between 21-25. Majority (98.5%) of mothers were married. Equal proportional of percentage of mothers had completed secondary education (26.5) and no formal education (26%). Majority (91.8%) of mothers was house wives, 39.3% of mothers have one live child and 37.8% of mothers have two live child. 40.3% of the mothers were in second parity and 34.2% of the mothers were in first parity. Majority (96.9%) of the mothers were Hindu.

Table no: 1 Utilization of MCH services

S.N	MCH Services	Freq-uency (F)	Percen-tage (%)
1.	Registration	151	77.0
2.	ANC visits (add minimum 1 to 3 visits)	146	74.5
3.	Urine test	135	68.9
4.	Hemoglobin test	86	43.9
5.	R.B.S test	63	32.1
6.	HIV test	78	39.8
7.	HBs Ag test	45	23.0
8.	Blood group test	80	40.8
9.	Tab folic acid	126	64.3
10.	Tab calcium(add minimum 1 to 100 tablets)	111	56.6
11.	Tab iron (add minimum 1 to 100 tablets)	115	58.7
12.	Inj t.t (add first and second both dose)	156	79.6
13.	Institutional delivery	160	81.6
14.	Post natal visit	121	61.7
15.	Free transport facility	102	52.0
16.	Immunization of baby	65	33.2
17.	Family planning	36	18.36
18.	Family planning counseling	60	30
19.	Breastfeeding counseling	75	38.2
20.	Baby care counseling	78	39.8
21.	J.S.Y services	162	82.7

Table no: 1 shows that out of 21 selected MCH services the average percentage (52.93%) was attended by 196 postnatal mothers. In that majority (82.7%) of mothers utilized the J.S.Y services, had delivered in hospital (81.6). Most of the mothers were registered (77%), attended minimum three antenatal visits (74.5%), attended postnatal visits (61.7%), taken iron tablets (minimum 1 to 100 tablets) (58.7%), taken calcium tablets (minimum 1 to 100 tablets) (56.6%). Mothers had done hemoglobin test (43.9%), HIV test

(39.8%), completed their babies immunization(33.2%). Whereas, least percentage (18.36%) of mothers were utilized family planning methods.

Table 2: Non-utilization of MCH services by mothers

S.N	MCH services	Frequency (F)	Percentage (%)
1.	**ANC visits**		
	Nil	50	25.6
	1visit	100	51.02
	2visit	40	20.40
	3visit	6	3.06
2.	**Tablet Iron**		
	Nil	81	41.32
	1-30 tab	30	15.30
	31-60 tab	56	28.57
	61 -100	29	14.79
3	**Inj. T.T**		
	Nil	40	20.40
	Dose Ist	20	10.20
	Dose IInd	136	69.38
4	**Postnatal visits**		
	Nil	75	38.3
	1 visits (48-78hrs)	0	0
	2 visits (7-14 days)	121	61.7
	3 visits (6 week after birth)	0	0
5.	**Tablet calcium**		
	Nil	85	43.36
	1-30 tab	30	15.30
	31-60 tab	56	28.58
	61 to above	25	12.76

Table no: 2 revealed that out of three antenatal visits most (51.02%) of the mothers had attended only one visit. Regarding supplementation, iron intake around ¼ (28.57%) of mothers had taken between 31-60 iron tablets. In the term of inj. T.T Most (69.38%) of mothers were completed both doses, regarding postnatal visits most (61.7%) of mothers had attended 2nd postnatal visit between 7-14 day after delivery. About calcium intake nearly half (43.36%) of mothers had not taken calcium tablet and 28.58% of mothers had taken tablet calcium between 31-60 tablets.

Table no: 3 Utilization of MCH services from private hospital

S.N	MCH services	Total utilization of MCH services govt. + private	Utilization of MCH services from private hospital	
		Percentage (%)	Frequency (F)	Percentage (%)
1.	Registration	77	28	14.28
2.	ANC visit(add minimum 1-3 visits)	74.5	28	14.28
3.	Urine test	68.9	28	14.28
4.	Hemoglobin test	43.9	28	14.28
5.	R.B.S test	32.1	28	14.28
6.	HIV test	39.8	28	14.28
7.	Hbs Ag test	23	28	14.28
8.	Blood group testing	40.8	28	14.28
9.	Tab folic acid	64.3	39	19.89
10.	Tab calcium	56.6	39	19.89
11.	Tab iron	58.7	39	19.89
12.	Inj t.t	79.6	10	5.10
13.	Institutional delivery	81.6	16	8.16

Table no: 3 Shows that out of 196 postnatal mothers, 39(19.89%) mothers received MCH services from private hospital. Further data presented that similar percentage (14.28%) of mothers have utilized the MCH services from private hospital i.e. registration, ANC visits, urine test, hemoglobin test, R.B.S test, HIV test, HBsAg test, blood group test from private hospital. Further 19.89% of mothers utilized services such as folic acid tablet, calcium table, iron tablet from private hospital. The least percentage (8.16%) of mothers was done institutional delivery.

Association between socio demographic variable with utilization of MCH services

Parity of the mothers (0.03) was significantly associated with utilization of MCH services. Other variables like Age, Marital status, Occupation, Education, No of live birth, Monthly income, Types

of family, Religion and Socio economic status of mothers not had enough statistical evidence to prove the association with the utilization of MCH services in hill areas of Uttarakhand.

DISCUSSION

In the present study, approximately half (49%) of mothers were in the age group between 21-25, 32.7% of mothers were in the age group of 26-30. It was supported by Parika Pahwal, Aditya Sood, that 58.5% of mothers belong to the age group of 20 to 25 years, followed by 31.7 % in the age group of 25 to 30.[7] In present finding, parity shows that 40.3% of the mothers were in second parity, 34.2% of the mothers were in first parity, 15.8% of the mothers were in third parity, least percentage (7.7%) of mothers were in fourth parity and only 2% of the mothers were in fifth parity. Supported by Kiplagat Micah Kipronoh 2005 While 44.1 % of the respondents had delivered once , half (50.8 %) of the mothers had delivered two and least (3.5 %) had delivered 5 or more times[8].

In present finding, majority (91.8%) of mothers were house wives, the least percentage (4.1% and 3.1%) of mothers were private employee (4.1) and govt. employee (3.1%), respectively. It was supported by Fenta melkamu that most of the respondent were housewives (81%),[9] followed by government employee 10.0%. Sandeep Sachdeva, Jagbir S Malik (2012) reported similar finding that 93% women were homemaker in rural area.[10] Present finding shows, equal proportional (26.5% and 26.0%) of mothers had completed secondary education (26.5%) and no formal education (26.0%) respectively. 16.8% of mothers completed primary education. It was supported by Onasoga A. Olayinka (2014), that similar percentage 21.9% of respondent had secondary education and no formal education, while 22 (11.4%) had primary education[11].

In this study, it was found that majority (82.7%) of mothers utilized the J.S.Y case benefits services in hilly area. It was contradictory to the finding by Vikram K., A.K. Sharma & A.T. Kannan (2013) stated that 14.5% had received cash benefits of JSY[12]. Most (74.5%) of the mothers attended (add minimum three visits) antenatal visits. It was supported by Parika Pahwa1, Aditya Sood that 77% of the respondents received antenatal care, 23% of the women did not receive even 1 ANC check up.[13]Regarding postnatal visits most (61.7%) of mothers had attended only 2nd postnatal visit when they are come for child immunization. It was contradictory by Manish K Singh, JV Singh, that 21.14% mothers had attained only one postnatal visit (postnatal check-up within 6 weeks of delivery)[14]. Regarding tablets intake around 28.57%) of mothers had taken between 31-60 iron tablets, least similar percentage of the mothers (15.30% and 14.79%) of mothers had taken between 1-30 and between 61 to 100 tablets and 41.32% had not taken iron tablets. It will indicate that in hilly area majority mothers were not taken sufficient amount of iron tablets. It was supported Digambar A. Chimankar1 and Harihar Sahoo reported that it is very alarming about three-fourth of women did not consume sufficient number of iron and folic acid (IFA) tablets in Uttarakhand.[15]

The finding of the present study shows that out of 196 postnatal 39 mothers utilized MCH services from private hospital due to unavailability of medicine and health personal in the MCH centers. it was supported by Meenakshi Kalhan, Anita punia, sandeep sachveda (2013) Out of the 1253 institutional deliveries, 84.6% were conducted in Government institutions while 15.4% deliveries were conducted in private hospital.[10] In present study found that parity is significant impact on utilization of MCH services. It was supported by Mluleki Tsawe1, Amos Moto2 2015, that parity is significant with the use of antenatal services.[16]

CONCLUSION

This study demonstrated that utilization of maternal health service is inadequate in hilly area in general, as clearly depicted by the major maternal health indicators (antenatal, delivery services and postnatal). Utilizing antenatal care services is particularly important to the pregnant women who are most likely to be prone to developed obstetric complications. The “Maternal health services” need to continuously sensitize the community so that the number of mother attained the all MCH services for increased to attain the national target.

Acknowledgement – Nil

Ethical Clearance – Taken from Swami Rama Himalayan University, Dehradun.

Source of Funding – Self

Conflict of Interest - Nil

REFERENCE

1. Introduction to pregnancy- referral solution group. Aug 12, 2005. Available from : https: //www.mentalhelp.net/articles/in Jessica Evert, MD.
2. Mathew J. effectiveness of a stuructured teaching programme for antenatal women on high risk condition in pregnancy at the antenatal clinic. Indian J of obstetrics and gynocoogy. 2006 (cities 2014 april 14); Available from: http// 14. 139.159. 4:8080/jspuri/bitstream/ 123456/1444/1/ CDNNOBG00050
3. Over view of pregnancy complication. 28 Jan 2015. Available from : http://bestpractice.bmj.com/ best-practice/monograph/494.html
4. Elangbam, Sunita D. A study to assess the knowledge and attitude regarding the utilization of MCH services selectedhospital,Bangalore. 2005; 5. Available from : www.rguhs.ac.in
5. Murthy BK, Murthy MB, Prabhu PM. Maternal Mortality in a Tertiary Care Hospital: A 10-year Review. Journal of PMCID: PMC3570901,2003; .4(1). 105–9. Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/ PMC3570901/
6. Sharma P, Kishore S, Gupta SK, Semwa J. Effects of janani suraksha yojana (a maternity benefit scheme) up-on the utilization of ante-natal care services in rural & urban-slum communities of Dehradun. National Journal of Community Medicine. 2012; 3: 137-9**.**
7. Sood A, Pahwa P. Exististing practice and barriers to acess of MCH services- a case study of residential urban slums of district mohali, Punjab, India. Global Journal of medicine and Punjab health. 2013; 2(4): 1-8.Available from:- www. Research gate. Net/ publication/ 260932677
8. Kiplagat, Micah, Kipronoh. Factors influencing the quality of antenatal care in public maternal and child health facilities innairobi province Kenya 2009.Available from: http:// irlibrary.ku.ac.ke/bistream/handle/12345678
9. Fenta M. Assessment of factors affecting utilization affecting utilization of maternal health care services in ayssaita and Dubti town, Afar regional state, North east ethiopiahttps, Available from:-www.datafirst.uct.ac.za/datap ortal/index.php/citations/586
10. Jagbir singh, Malik, Meenakshi, kalhan, Sachveda S. Utilization of health services under janani suraksha yojana in rural Haryana. 2013(3).176-9. Available from: www.ijmedph.org/article.as
11. Onasoga A. Olayinka. Awareness and barriers to utilization of maternal health care services among reproductive women in Amassoma community, Bayelsa state. International Journal of nursing and midwifery. 2014; 6: 10-5.
12. Vikram K, Sharma AK & kannan AT. Beneficiary level factors influencing suraksha yojana utilization in urban slum population of trans-Yamuna area of delhi. Indian J.Med Res 2013; 138: 340-51. Available from : http://icmr.nic.in/ ijmrjanan.
13. Sood A, Pahwa P. Exististing practice and barriers to acess of MCH services- a case study of residential urban slums of district mohali, Punjab, India. Global Journal of medicine and Punjab health. 2013; 2(4): 1-8.Available from:- www. Research gate. Net/ publication/ 260932677
14. Mamish K. Singh, JV singh, N, kumara R, khanna A. Factors influencing utilization of ASHA servies under NRHM in relation to maternal health in rural lucknow. Indian journal of community medicine. 2009; 35(3). 414-9.Available from : http:// medind.nic.in/iaj/ t10/i3/iajt10i3414.htm.
15. Chimankar DK, Sahoo H. Factors influencing the utilization of maternal health care services in uttarakhand, 2011; 5(3): 209-16. Available from: http://www.krepublishers.con.02-journal/S-EM/ EM-05-0-000-11-web/2011.
16. Tsawe M, Motoi A, Netshivhere T, Ralesego L, Nyathi C and Susuman AS. Factors influencing the use of maternal healthcare services and childhood immunization in Swaziland. International J of equity in health. 2014; 14: Available from : http://www.equtihealthj.com.

DOI Number: 10.5958/0974-9357.2016.00088.X

A Descriptive Study to Assess the Stress as an Impact of Flood among People Living in Flood Affected Areas in Majuli, Assam

Usha Rani Devi[1], Arunjyoti Baruah[2], Biyola Baruah[3]

[1]MSc Nursing, [2]Professor & HOD, [3]MSc Nursing Staff, Department of Psychiatric Nursing, LGB Regional Institute of Mental health, Tezpur, Assam, India

ABSTRACT

Flooding is the most common of all natural hazards globally. Flood can cause a wide range of negative psychological responses like post traumatic stress disorder. This study was conducted to assess the stress among flood affected people and also to find out the association between stress and selected socio demographic variables. The study followed a quantitative, descriptive survey approach with non-experimental descriptive design. A sample of 200 flood affected people living in Majuli, Assam was selected through purposive sampling techniques. The tools used for the study included Socio-demographic performa and Impact of Event Scale Revised (IES-R) to assess the stress. The result showed that 63% of the flood affected people had high chances of having stress disorder. The chi-squire values of selected demographic variables depicted significant association between stress and numbers of family members and no association was found between stress and other variables. Stress was very common among flood victims. It is a great responsibility of the psychiatric nurses to plan and deliver nursing services to support people who were affected by flooding.

Keyword- *Stress and flood.*

INTRODUCTION

A natural disaster is any event of force of nature that is caused by environmental factors that has catastrophic consequences. For any human being, no other word encapsulates as much horror, misery, helplessness and doom as the term "Natural Disaster". Every year disasters not only destroy thousands of people and their properties but sometimes end entire blood lines. These can cause great stress to people, families and communities because of their inherent effects, such as causing short-term fear of death. Studies have shown that more than two thirds of the general population are likely to be exposed to trauma in their lifespan.[1,2]

Flood is one of the most common and severe forms of natural disasters which causes stress. Post traumatic stress is a severe and complex fact precipitated by exposure to psychologically distressing events like traffic accidents, violent, hurricanes, earthquakes and floods, and it is characterized by persistent intrusive memories about the traumatic event, persistent avoidance of stimuli associated with the trauma, and persistent symptoms of increased arousal. [3]

According to a report from the International Strategy for Disaster Reduction (ISDR), an organization headed by the United Nations secretary for humanitarian affairs, globally there were 539,811 deaths, 361,974 injuries and 2,821,895,005 people affected by floods between 1980 and 2009. Of the India's total geographical area of 329 million hectares, 40 million hectares is prone to floods. [4, 5]

Corresponding author:
Usha Rani Devi
M.Sc Nursing (Psychiatric Nursing)
Department of Psychiatric Nursing
LGB Regional Institute of Mental health, Tezpur, Assam, India, Pin code: 784001
E-mail I.D: devi.usharani@gmail.com
Ph no.: 07896573123

Majuli, the largest riverine island in Assam, nestles in the lap of the mighty Brahmaputra. This is where the 15th century saint and fountain head of Assamese culture, Sankardeva, first established Satra. The largest riverine island, once covering 1,226 square kilometres, Majuli has declined to a mere 576 square km in a little under thirty years due to massive erosion caused by the annual monsoon that hits this island hard.[6] In Majuli the problem of flood and riverbank erosion is of serious concern. In August, 2008, almost 90% of the 154 villages on the island were affected by flood. In all, 12,000 families were displaced, and 9,135 hectares of crop were destroyed. [7, 8]

The area is also facing some other subsequent problems due to flood like embankment breach, road breach and sand casting. The flood water entering the villages due to breach in the embankments also has a great force and thereby causes large-scale damages to houses and properties. Excluding the salaried class the affected people income levels dropped to zero at the time of high water. This is severe particularly for daily wage earners since they could not go out for regular works to meet daily needs. Outbreaks of disease among the people also take a serious form at the time of flood. Disease like gastro enteritis, diarrhoea, dysentery and viral fever were common during and after floods. Non-availabilities of medicines and health care members and poor road conditions intensify the misery. In Majuli, people must cross different streams and foot bridges (often damage) to reach the nearest PHC.[9]

And also from the life experiences, the researcher has seen how people are suffering due to constant flood every year. Most of the time people became homeless and displaced, lost their personal and public property. There is death of domestic animals and also lost of human life. During the time of flood people never get proper food and water and other basic things to live. Most of the people had main source of income from cultivation, severe degradation and loss of cultivable land reduced in productivity of crops. So, income level was dropping down year after year and it makes people unemployed which is exacerbating poverty and making susceptible to other abuses like smoking, alcohol etc. Apart from these it has significant effects on people's wellbeing, relationships and mental health. Some survivors are more affected and develop serious mental health problems, such as anxiety disorders, depression and post –traumatic stress disorder (PTSD). Mainly groups like single women, pregnant lady, children, old age people and men and women with negative coping behaviour are the most vulnerable groups. Based on this devastating scenario it has become essential to explore more into the problem, so that the level of stress could be identified and future intervention could be planned and implemented. Also this study can provide a detailed report for policymakers and services, which highlight the evidence about the impact of flooding on people's mental health, and based on this study various governmental and non-governmental agencies, can apply some practical methods to reduce the impact. The outcome of this study will help to plan and implement various stress and crisis management strategies according to the severity of stress among flood affected people.

MATERIALS & METHOD

The study was conducted with the objectives to assess stress as an impact of flood among flood affected people and to find out the association between stress with some selected socio demographic variables.

The study followed a quantitative, descriptive survey approach with non-experimental descriptive design. The sample size was 200 flood affected people living in Majuli, Assam. Participants were selected through purposive sampling techniques. The age of the study group was from 18-60 years, comprising of both the genders who could read and write Assamese. The tools used for the study included Socio-demographic performa and Impact of Event Scale Revised (IES-R). IES-R was translated to the Assamese language for better understanding of the subjects. The Impact of Event Scale-Revised (IES-R) is a self-report measure of current subjective distress in response to a specific traumatic event which was developed by Weiss and Marmar in 1997. The 22-item scale is comprised of 3 subscales representative of the major symptom clusters of post-traumatic stress: intrusion, avoidance, and hyperarousal. The reliability of the tool was 0.907, which showed that the tool was reliable. After obtaining the written permission from the Gaonburha of Karatipar panchayat, Majuli, Assam and ethical clearance from Institutional Ethical Committee, the study sample

was collected from the 12th September, 2014 to 28th September 2014. Informed consent was taken from the respondents after explaining the purpose of the study and assuring confidentiality and anonymity. Descriptive and inferential statistics were used in order to analyze the data using SPSS version 20.

FINDINGS

Table 1: Socio demographic variables of the Respondents N=200

Socio demographic variables	Frequency	Percentage (%)
Age		
19-25 years	43	21.5%
26-35 years	57	28.5%
36-45 years	47	23.5%
46-60 years	53	26.5%
Sex		
Male	108	54%
Female	92	46%
Marital status		
Married	165	82.5%
Unmarried	35	17.5%
Educational status		
Primary school education	58	29%
High School education	58	29%
Higher secondary education	61	30.5%
Graduation or above	23	11.5%
Occupation		
Cultivation	92	46%
Business	23	11.5%
Private Job	4	2%
Govt Job	35	17.5%
Daily Wager	1	.5%
Unemployed	31	15.5%
Others	14	7%
Type of family		
Nuclear family	154	77%
Joint family	46	23%
Monthly income		
< Rs. 5000/-	47	23.5%
Rs. 5000-10,000/-	74	37%
Rs. 10,001-15000/-	35	17.5%
Rs. 15,001-20,000/-	29	14.5%
>Rs. 20,000/-	15	7.5%
Number of family members		
1-5	125	62.5%
6-10	66	33%
>10	9	4.5%
Availability of safe place		
Available	137	68.5%
Unavailable	63	31.5%

Table-1 showed that majority of the flood affected people i.e 28.5% belonged to the age group of 26-35 years, majority of the them i.e 54% were male and 82.5% were married, majority of them i.e, 30.5% have completed higher secondary level of education, most of them i.e 46% were cultivator, majority of them i.e 77% belonged to nuclear family with 62.5% having family members between 1-5, most of them i.e 37% had a family income of Rs. 5000-10,000/-, and majority of people i.e 68.5% had available safe places to shift during the time of excessive flood.

Table 2: Distribution of frequency and percentage of the stress score of the respondents N=200

Stress	Frequency	Percentage (%)
1-11 (little or no symptoms of stress)	6	3%
12-32(several symptoms of stress)	68	34%
Equal or more than 32 (May presence of post traumatic stress disorder)	126	63%

The data in table 2 showed that among 200 respondents, majority i.e, 63% (n=126) of the flood affected people had high chances of having stress disorder who needed referral and elaborate assessment , and 34% (n=68) of flood affected people had presented several symptoms of stress but only patient monitoring was required. Whereas 3% (n=6) of them had no or little symptoms of stress.

Table 3- Mean and standard deviation value of three subscale of IES-R:

S. No.	Subscale	Mean	Std. Deviation
1.	Avoidance subscale	1.3125	0.63861
2.	Intrusion subscale	1.8450	0.69039
3.	Hyper arousal subscale	2.0233	0.80549

The data presented in table 3 showed the results of the mean value and SD of various subscale of IES-R. The avoidance subscale mean was 1.3125 ± 0.63861 which indicated that a little bit of avoidance symptoms were present among the respondents. The intrusion subscale mean was 1.8450±0.69039 and hyperarousal subscale mean was 2.0233± 0.80549 which indicated that moderate level of intrusion and hyperarousal symptoms were present among the respondents.

Table-4 Correlation between three subscales of IES-R and each subscale with IES-R -

	Avoidance subscale	Intrusion subscale	Hyperarousal subscale	IES-R
Avoidance subscale	1.000	.568**	.582**	.817**
Intrusion subscale		1.000	.795 **	.906**
Hyperarousal subscale			1.000	.901**
IES-R				1.000

**all correlations are significant at P (< 0.01)

Table 4 showed a significant positive correlation between avoidance subscale with intrusion subscale and hyperarousal subscale. Also a significant positive correlation was found between intrusion subscale with hyperarousal subscale and mean score of the IES-R has significant positive correlation with avoidance subscale, intrusion subscale and hyperarousal subscale.

Table 5: Chi-square test (x^2) to assess the association of stress with selected demographic variables-

Demographic variables		1-32	Equal and >33	Chi-square test(x^2)	df	Table value	Signi-ficance
Age	19-35yrs	36	64	.086	1	3.84	**NS**
	36-60yrs	38	62				
Sex	Male	39	69	.080	1	3.84	NS
	Female	35	57				
Marital status	Married	61	105	.027	1	3.84	**NS**
	Unmarried	13	21				
Educational status	High school	39	77	1.353	1	3.84	**NS**
	Higher Secondary and above	35	49				
Occupation	Cultivation and Business	39	73	.518	1	3.84	**NS**
	Govt employee and other	35	53				
Type of family	Nuclear	57	98	.015	1	3.84	**NS**
	Joint	17	28				
Monthly income	<Rs.5000/-10,000/	44	77	.053	1	3.84	**NS**
	Rs 10,001/->Rs 20000	30	49				
Number of family members	1-5	39	86	4.811	1	3.84	**S**
	6-10 and >10	35	40				
Availability of any safe place to shift during the time of excessive flood	Available	52	85	.171	1	3.84	**NS**
	Not available	22	41				

NS- Not significant ***Significant at P (<0.05)** **S- Significant**

The data presented in table 5 showed a significant relationship with stress and number of family members and no significant association was found between stress and other socio-demographic variables.

DISCUSSION

Stress refers to the strain from the conflict between external environment and internal environment of human, leading to emotional and physical pressure. In the present study it was found that among 200 flood affected people, majority i.e, 63% of the flood affected people had high chances of having stress disorder that need referral and elaborate assessment, and 34% of flood affected people had presented several symptoms of stress but only patient monitoring was required. Whereas 3% of them had no or little symptoms of stress.

Similar finding was found in a study conducted by Ramachandran et al[10] among population affected by the calamity in coastal populations of southern India that a higher percentage (61.3 %) of the tsunami population had stress. The finding was also found similar with the study done by John et al[11] among children and adolescents affected by tsunami disaster in Tamil Nadu where the result revealed a prevalence of 70.7% for acute PTSD and 10.9% for delayed onset PTSD. Another study conducted by Sharan et al[12] among natural disaster survivor in rural India also showed that posttraumatic stress disorder was 23% and major depression was 21%.

In the present study it was found that a little bit of avoidance symptoms are present among the respondents and moderate level of intrusion and hyperarousal symptoms are present among the respondents. These findings corroborates with the findings of Heir et al[13] who assessed the Posttraumatic Stress symptoms in a Tsunami-Affected Tourist population found that hyperarousal was the most prominent symptom cluster that related to disaster exposure, followed by intrusion and then avoidance.

The study finding showed that there is a significant relationship with stress and number of family members and there was no significant association with stress and age, sex, marital status, educational status, occupation, type of family, monthly income, availability of safe place to shift during the time of excessive flood.

During flood period only limited resources like food, drinking water etc are available. So, if there are more members in a family, it increases the demand for these resources which can lead to increase stress among the survivors. Another study conducted by Huang et al[3] found that the demographic variables i.e age, sex, education, occupation, type of flood, severity of flood etc were not associated with post traumatic stress disorder.

CONCLUSION

The frequency of floods is increasing. The mental health problems relating to flooding is variable and depends on each extreme event and the capability of the rescue and recovery services. The researcher identifies the implications of this study for policymakers, the responsible government agencies, and health and social care services. As one of the crucial mental health care personnel, psychiatric nurse has an extended and expanded role to play in disaster management. Huge responsibility lies on the shoulder of the psychiatric nurses to plan, deliver and improved services to support people who are affected by flood with the intention of reducing their suffering, reducing the risks for developing long-term mental disorders.

Acknowledgement-: The authors would like to acknowledge Dipali Saikia Bhuyan, Gaonburha, Karatipar panchayat of Majuli for permitting to conduct this study, Bineeta Nath and Arundhati Deka Nath for providing statistical and computer programming assistance, also we are thankfull to Sunil Kumar Nath, Kaushik Nath, Bhuban Ntah and Anupam Kaushik Borah for their helps during the time of data collection, and the subjects who volunteered their time to participate in this study.

Conflict of Interest- Nil

Source of Fundings- Self

Ethical Clearance- It was obtained from the institutional ethical committee.

REFERENCES

1. Lock S, Rubin G J, Murray V, Rogers M B, Amlot R, Williams R. Secondary stressors and extreme

events and disasters: a systematic review of primary research from 2010-2011. [serial online] [cited 2014 May 29]; 38(4). Available from:URL: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3492002/

2. Neria1Y, Nandi A, Galea S. Post-traumatic stress disorder following disasters: a systematic review. [serial online] [cited 2014 May 29]; 38(4). Available from: URL:http//www.ncbi.nlm.nih.gov/m/pubmed/
3. Huang P. Prediction of posttraumatic stress disorder among adults in flood district. [serial online] [cited 2014 July 5]. Available from: URL: http://www.biomedcentral.com/1471-2458/10/207
4. Duggal K. Top 10 Common Natural Disasters that Affect People. [online] 2014 February 28 [cited 2014 May 29]. Available from: URL:http://listdose.com/top-10-common-natural-disasters-that-affect-people/
5. Rai S.P. Community approach to flood management. [online] [cited 2014 July 15]. Available from: URL:http://nidm.gov.in/idmc/Proceedings/Flood/B2%20-%2013.pdf
6. Fighting the floods on the Island of Majuli. [online] [cited 2014 May 29]; Available from: URL:http://www.acted.org/en/fighting-floods-island-majuli
7. Background Information of Assam Flood. [online] [cited 2014 July 29]. Available from: URL:http://anupkotoki.hpage.co.in/flood-in-assam_12036978.html
8. Flood in Majuli, Assam. [online] [cited 2014 May 29]; Available from: URL:http://publications.aidindia.org/content/view/682/130/
9. Hazarika S. Living Intelligently with Flood. [online] [cited 2014 May 30]; Available from: URL:http://web.worldbank.org/.../PAPER_5_.PDF publications.aidindia.org/content/view/682/130/
10. Ramachandran A et al. Stress and Undetected Hyperglycemia in Southern Indian Coastal Population Affected by Tsunami. [serial online] [cited 2014 Oct 3]. Available from: URL: www.hemato-onco.com
11. John PB et al conducted a study to assess prevalence of posttraumatic stress disorder among children and adolescents affected by tsunami disaster in Tamil Nadu. Disaster Manag Response [serial online] 2007 Jan-Mar [cited 2014 May 30]; 5(1):3-7. Available from: URL: http://www.ncbi.nlm.nih.gov/pubmed/17306747
12. Sharan P, Chaudhary G, Kavathekar SA, Saxena S. Preliminary report of psychiatric disorders in survivors of a severe earthquake. Am J Psychiatry [serial online] 1996 Apr [cited 2014 June 18]; 153(4):556-8. Available from: URL: http://www.ncbi.nlm.nih.gov/pubmed/8599406?dopt=Abstract
13. Heir T, Sandvik L, Weisaeth L. Hallmarks of Posttraumatic Stress: Symptom Z-Scores in a Tsunami-Affected Tourist Population. Psychopathology [serial online] April 2009 [cited 2 Nov 2014]; 42(3). Available from: URL:http://www.karger.com/Article/FullText/207457

DOI Number: 10.5958/0974-9357.2016.00089.1

Nurses Communication with Altered Level of Consciousness Patients

Pooja Thakur[1], Mahalingam Venkateshan[2], Rajesh Kumar Sharma[2], Kamli Prakash[3]

[1]Nursing Tutor, [2]Assistant Professor, [3]Associate Professor, Himalayan College of Nursing, SRHU, Dehradun, Uttarakhand, India

ABSTRACT

Introduction: Effective communication is one of the basis of professional nursing practices and the art of caring holistically for patients, especially in Intensive Care Unit. **Aim:** To evaluate current communication pattern between ICU nurses and altered level of conscious patients, explore the Nurses Knowledge, and also find the need for Structured Nursing care Protocol on communication with altered level of conscious patients. **Methodology-** A Exploratory descriptive design was used for study the knowledge and practice of the nurses in intensive care unit. Selected forty communication events were observed and the same nurses were enumerated to study their knowledge. The nurses who were caring more than one patient and the patient GCS>8 were excluded from the study. **Results:** The practice score of the staff nurses were10.08±3.24 which is ranged from 1 to 32. This practice score denotes nurses were rarely communication with altered level of conscious patients. The knowledge score of the staff nurses was 13.05±2.38 which is ranged from 1 to 24 also depicts that they were having average awareness. **Conclusion:** The present communication pattern between nurses with altered level of conscious patients and nurse's knowledge score, indicating the great need of Structured Nursing Care protocol regarding communication with altered level conscious patients, where high-quality communication is a key determinant and facilitator of patient-centered care.

Keywords: *Altered level of consciousness, Communication, knowledge, Nursing care Protocol, Practice.*

INTRODUCTION

Effective communication has been praised as the basis of all nursing care, especially, for the patient with altered level of consciousness, who is dependent on the speech and hearing channel for sensory stimulation.(1) Effective communication is one of the basis of professional nursing practice and the art of caring comprehensively and holistically for patients. Indeed, as nurses are the professionals that have the maximum contact with patients, ensuring that their communication needs are fully met. (2)

Corresponding author:
Mr. Mahalingam Venkateshan
Assistant Professor, Himalayan College of Nursing, SRHU, Jolly Grant, Doiwala (Post) Dehradun, Uttarakhand, India, 248140, Email: mvenkatesh@srhu.edu.in milkymaha2007@gmail.com

An altered level of consciousness (ALOC) is apparent in the patient who is not oriented, does not follow command or needs persistent stimuli to achieve the state of alertness. Altered Level of Consciousness (ALOC) is gauged on a continuum with a normal state of alertness and full cognition. ALOC is a sensitive and reliable indicator of the patient neurological status. It is not a disorder by itself, it is a result of multiple pathophysiologic phenomena, It may be neurologic (Head injury, stroke), Toxicologic (Drug overdose, Alcohol intoxication), or metabolic(diabetic keto -acidosis, hepatic disease2 The world about 20 million peoples are being admitted in ICU's due to various causes.(3)

The World Health Organization [WHO] estimates that 5 million deaths occurred every year in Intensive Care Units.(4) In India every year approximately 3.2million ICU's admissions are occurring. In which 80% patients are in coma stage

and in that 48000 deaths are occurring. Every human being has the right to know the things that has been done to him/her while he/she is conscious or unconscious.[5] Verbal communication is supreme in the delivery of proficient health and nursing care.[6] Familiar voices or using patients preferred name and individualized care may provide better sensory input. This gives more humanized care than technical care. Thus communication is central to the essence of socialization.[7]

Mckenna .et al (1997) reported that "A proper nurse - patient communication helps in improving the patient outcome. Lack of communication may exacerbate the already compromised condition of the patient.[8]

Many altered level of conscious patients admitted in the ICU are deprived of adequate information from nurses. The most important skill for a nurse is to master the ability to convey meaningful messages effectively and intelligently to patients. Considering the challenges present between nurse- patient communication, the investigator like to evaluate existing practice and knowledge of the critical care Nurses

MATERIAL & METHOD

Exploratory-Descriptive design with quantitative approach was followed to attain an error free outcome of the study. The staff nurses caring for altered level of conscious patients were the universe of the study population. Intensive care unit was the setting of the study, which is the part of multispecialty Hospital. Forty communication events were observed and same nurses were enumerated to assess their knowledge. The inclusion criteria for the study were patient having GCS≤8/15, Nurse patient ratio 1:1 and interested to give consent for the study. The communication event was observed with help of structured observational checklist which consists of the two domains i.e Verbal communication, Non verbal communication span. The knowledge of the staff nurses were assessed by structured questionnaire which consist of three domains i.e, altered level of consciousness, communication process and communication skills. Informed consent was obtained from the study participants and Ethical permission was taken from the Ethical committee.

RESULTS

Table No 1 : Frequency and Percentage distribution of personal profile of staff Nurses. (N= 40)

S.No	Personal Characteristics	Frequency (f)	Percentage (%)
1.	**Age (Years)**		
	22-29	30	75%
	29-38	10	25%
2.	**Gender**		
	Male	18	45%
	Female	22	55%
3.	**Professional Qualification**		
	GNM	30	75%
	B.Sc (N)	10	25%
4.	**Total year of Experience in Nursing Practice**		
	Below 24month	19	47.5%
	Above 24 month	21	52.5%
5.	**Area of Experience**		
	Critical	34	85
	Critical/noncritical	4	10
	Noncritical	2	5

Table no.1 illustrates that, a three-fourth (75%) of the staff nurses were in the age group of 22 - 29 years, both males (45%) and females (55%) were more or less equally participated in the study and three –forth (75%) of staff nurses were diploma holders. Approximately every first (47.5%) nurse were having clinical experience less than 24 months and every second (52.5%) nurse having more than 24 months of clinical experience . Majority (95%) of staff Nurses had past experience in critical care areas and a least (5%) had in Non critical care areas.

Table No 2: Practice Score of staff nurses on communication for patient with altered level of consciousness (N=40)

S. No	Characteristic	Max score	Mean and Standard Deviation	Mean %	Range of Score
1.	Practice score	32	10.08±3.24	31.5%	1-18

Table no-2 Shows that Practice mean percentage of the staff nurses on communication for patient with altered level of consciousness was 31.5%. Hence it can be interpreted that the staff nurses were rarely communicating with altered level of conscious patients.

Item wise Practice Compliance of staff Nurses on communication for patient with altered level of consciousness. (N=40)

S.No	Event	Frequencies	Percentage
1	Calling the patient by name	40	100%
2	Greeting the patient	38	95%
3	Introducing herself/himself to the patient .	36	90%
4.	Providing privacy during communication.	36	90%
5.	Giving Therapeutic touch while calling/caring	33	82.5%
6.	Orienting the patient about day and time/place.	33	82.5%
7.	Explaining the procedure to the patient	33	82.5%
8	Using appropriate non-technical language	31	77.5%
9	Maintaining personal space during care.	30	75%
10	Communicating with the patient while performing procedures	27	67.5%
11	Maintaining Individuality of the patient.	5	12.5%
12	Informing the patient about his/her near and dear ones	4	10%
13	Use abuse-free, verbal and non-verbal communication with clients and their families	4	10%
14	Communicating with hope ful word about the progress /condition.	3	7.5%
15	Maintain environment feasible for effective communication –Noise free environment	3	7.5%
16	Having social conversation.	3	7.5%
17	Communicates in a respectful , professional manners with family members.	2	5%
18	Communicates according to stages of development.	2	5%
19	Communicates according to cultural background	1	2.5%
20	Demonstrate non judgemental listening.	1	2.5%
21	Use short, simple words and sentences	1	2.5%
22	Demonstrating congruence	1	2.5%
23	Demonstrating Attentiveness	-	-
24	Communicates thoughts, feelings, and ideas with justification	-	-
25	Demonstrating appropriate pleasant/ positive facial expression	-	-
26	Maintaining Postures: - leaning Forward , head node during conversation.	-	-
27	Providing Instrumental Touch	-	-
28	Demonstrate soothing vocal tones	-	-
29	Use assertive communication with the patient and their family member.	-	-
30	Confident in communication / interactions with health team and family member.	-	-
31	Providing reassurance	-	-
32	Shows exceptional communication skill to promote patient wellbeing	-	-

Table No: 3 Knowledge of staff nurses on communication for patient with altered level of consciousness. (N=40)

S.no	Characteristics.	Max. score	Mean and Standard Deviation	Mean Percentage	Range of Score
1.	Altered Level Of Consciousness (Domain 1)	8	3.35±1.21	41.8%	0-6
2.	Communication Process (Domain 2)	6	3.95±1.13	65.8%	1-6
3.	Communication Skill (Domain 3)	10	5.75± 1.44	57.5%	2-8
4.	Overall	24	13.05±2.38	54.3%	7-18

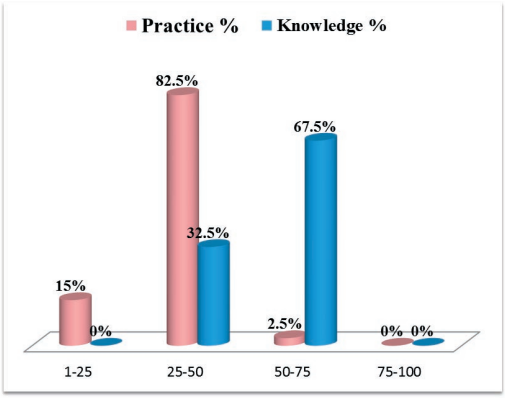
Table No: 3 depicts that the overall mean percentage of knowledge score was54.3%. The highest mean percentage (65.8%) in Domain of communication Process followed by communication skill (51.5 %) and altered level of consciousness (41.8%). Hence it can be interpreted that the staff nurses were having average knowledge score in total and also scored more or less equally in all the three domains .

Table No 4: Correlation between knowledge and practice score of staff nurses on communication for patient with altered level of consciousness. (N=40)

S.No	Characteristics	Pearson Correlation (r)	p value
1.	Knowledge score	0.153	0.345
2.	Practice score		

Table: 4 shows there was no significant correlation between Knowledge and Practice scores. Hence it can be interpreted that statically the knowledge score increase or decrease there won't be any changes in the practice score vise versa.

Practice and knowledge score of the staff nurses was not statistically associated with any of their personal Profile variables like age ,gender , professional education ,year of experience , additional qualification etc .



Graph No 5 :Analysis of knowledge and Practice of staff nurses to depicts the need for Nursing Care Protocol on communication for patient with altered level of consciousness.

Graph No 5 reveals the Majority (82.5%) of the staff Nurses were showing less importance to communication for patient with altered level of consciousness. The knowledge score shows that staff nurses understand about importance of communication, but they were not aware about "how to communicate with the critically ill patients".

DISCUSSION

A very small sample size and unique composition of the study population makes it difficult to compare this study with other available studies that are invariably non critical based, larger sample size and varying personal profile characteristics. In the present study it was observed that the staff nurses were rarely communicating with altered level conscious patient. These findings are supported by Helen Sheela Wilson (2001) who stated that only 11.9 % staff nurses had practice on communication for patient with altered level of consciousness. [9] Weich M (1999) reported that the Communication, both verbal and non-verbal, is a greatly neglected skill at present scenario. [10] A study done by Baker C, Melby V (1999) in Northern Ireland found that the nurses used only 5% of the time for the verbal communication to unconscious patient while providing care to them. The staff were having Average knowledge regarding how to communicate with altered level of conscious patient. [11] It might be associated with the fact that staff nurses reported that they not had any exposure with training program like How to communicate with altered level of conscious patient and also not attended any other critical care nursing programme.

Thomas daya (2006) also reported that the staff nurses had mean knowledge score 10.1 in the area of communicating with unconscious patient[12] and Helen Sheela Wilson (2001) also reported that majority nurses had 60.9% knowledge, 11.9% practice and most of the nurses had favorable attitude regarding verbal communication to unconscious patients.[9] The investigator observed that majority of the staff Nurses were showing less importance to communication for patient with altered level of consciousness . The knowledge score estimation reflect that staff nurses were often explored with training programme related to communication with altered level of conscious patients . The investigator during her clinical experience also found that the nurses working in ICUs focusing only on the physical needs of the patients. Verbal and non-verbal communication, are greatly neglected areas in Intensive care setups, in present scenario these communication had great influences on psychological wellbeing of the patient. Ruth M. Kleinpell(2008) Several tools and strategies like Nursing care Protocols and other readily available resources can be used to enhance communication in the ICU for patients with altered communication abilities.[13]) Beverley Soltysiak, Paul O'Shea, (2003) stated that continuously steering the program on implementation of communication protocol will positively enhance the sensory impairment.[14] Michael Swash (2002) said that Professionals working in the Intensive Care environment report that successful communication is important although time consuming and feel that they lack training in this area.[15] Saima Merchant (2011) also show in her study results indicated that a small proportion of time i.e. only 0.056% was spent by the ICU nurses in actual verbal communication with their patients. The study findings have highlighted the need for nurses to be vigilant and to make deliberate efforts for verbal communication with unconscious/sedated patients. Thus the above statement sensitizing the importance of structure protocol on communication.[16] Study recommendations are Structure communication protocol must be developed, tested and implemented in Critical care Units, the long term outcome of the structured communication Protocol can be tested, factors affecting communication with altered level of conscious patient must be identified and resolved out in critical care unit.

CONCLUSION

Staff nurses working in the ICU were giving less importance to communication for patients with altered level of consciousness. Even though many of the staff nurses were taking care of the altered level of conscious patients for many year none of them had a previous exposure to any training programme on communication for altered level of conscious patient. Critical care team members should be train to enhance the communication with altered level of conscious patient.

Acknowledgement: No

Conflict of Interest: No

Source of Funding: Self

Ethical Clearance: Ethical committee permission was obtained from the HIHT Ethical committee before starting the study.

REFERENCES

1. Keith Loria .Communication is Critical in ICU Nursing: Continuity of care relies upon the communication skills of nurses. 6 March; 2013. http://nursing.advanceweb.com/Features/Articles/Communication-is-Critical-in-ICU-Nursing.aspx.
2. Hemsley B, Balandin S, Worrall L. Nursing the patient with complex communication needs: time as a barrier and a facilitator to successful communication in hospital. J Adv Nurs. 2012;68(1):116–26. http://onlinelibrary.wiley.com/doi/10.1111/j.1365-648.2011.05722.x/abstract
3. Dutta Rita. American Association of physician of Indian origin to standardize Trauma care in India Mumbai. The Nursing journal of India vol No.9-June-2009.
4. Atihcy B.S. – WHO collaborating centre of Trauma and fire disasters Geneva Switzerland – Annals of burns and fire disasters. vol -XVII n-1 march 2005.
5. Ronald D. Miller. Anesthesia. Philadelphia. W.B.Saunders. 2000. Vol5:54-60.
6. Cioffi Jane.R.N. Communicating with culturally and linguistically diverse patients in an acute care settings: Nurses experiences. International Journal of Nursing Studies. 2003; 40:299-306. http://www.deepdyve.com/lp/elsevier/communicating-with-culturally-and-linguistically-diverse-patients-in-FlUrb9Cdmu
7. Myco Freda. Care of the unconscious patients: A Complementary Perspective. Journal of Advanced Nursing. 1980;5: 273-283. http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2648.1980.tb03352.x/abstract
8. Assworth , Black-deeny & Mckenna. Communication with critically ill patients. http://www.researchgate.net/publication/7895958_Communication_with_critically_ill_patients.
9. Helen Sheela Wilson. A study to assess the knowledge, practice and attitude of ICU nurses on communication to unconscious patients, CMC Vellore. MGR University Tamil Nadu 2001
10. Weich M.Communication with patients-the effect of verbal and nonverbal communication on the unconscious patient. 1992 Sep; 15(3): 27-30. http://www.ncbi.nlm.nih.gov/pubmed/1301301
11. Baker C, Melby V. An investigation into the attitudes and practices of intensive care nurses towards verbal communication with unconscious patients. J Clin Nurs. 1996;5(3): 185–92. http://www.ncbi.nlm.nih.gov/pubmed/8705084.
12 . Thomas .D. Study to assess the effectiveness of planned teaching program for nurses working in icu on unconscious patient .Karnataka (2006). http://14.139.159.4:8080/jspui/bitstream/123456789/2687/1/Thomas%20SR%20Daya.pdf
13. Ruth M. Kleinpell, Lance Patak, Amy Wilson-Stronks, John Costello, Colleen Person, Elizabeth ,A Henneman et al . Communication in the ICU .December 10, 2008 http://nursing.advanceweb.com/Article/Communication-in-the-ICU-2.aspx.
14. Beverley Soltysiak . Paul O'Shea. A communication protocol to help patients with sensory impairment. 2003june http://www.nursingtimes.net/a-communication-protocol-to-help-patients-with-sensory-impairment/197682.article
15. Michael Swash. Hutchison's Clinical Method. Twenty First Edition, London 2002, page 340. www.barnesandnoble.com/…/hutchisons-clinical-methods-michael-swash.
16. Saima Merchant .Nature of Nurses' Verbal Communication with Unconscious or Sedated Patients in an Intensive Care Unit at a Tertiary Care Hospital 2011 Nov, Nurs Times. 1996 Apr 24-30;92(17):27-30. https://stti.confex.com/stti/bc41/webprogram/Paper48450.html

DOI Number: 10.5958/0974-9357.2016.00090.8

Multi-linear Pathways in Nursing Education in Nigeria: A Professional Albatross

Makata N E[1], Ilo C I[2], Agbapuonwu N E[2]

[1]Department of Nursing Services, Enugu State Ministry of Health Enugu,
[2]Nnamdi Azikiwe University Awka Anambra State Nigeria

ABSTRACT

The pathways of nursing education in Nigeria is characterised by multiple routes with multiple not clearly quantified certificates. This trend is inimical to the growth and development of professional nursing as it has resulted to fragmentation of Nursing profession, poor public image/perception of nurses/nursing profession, restricted career pattern for nurses, shortage of BNSC nurses/faculty among others. These have implications for development of nursing profession, health care outcome for recipients of nursing and inter professional relationship among other health care team members. Bachelor of Nursing Science (BNSc.) should be minimum entry for nursing professional practice, resources should be harnessed to make it a reality through opening more BNSc. degree awarding departments including part time programmes and motivating Registered Nurses (RNs) to go back to school for their BNSc. degree.

Keywords: *Multi-linear Pathways, Nursing, Education, albatross.*

INTRODUCTION

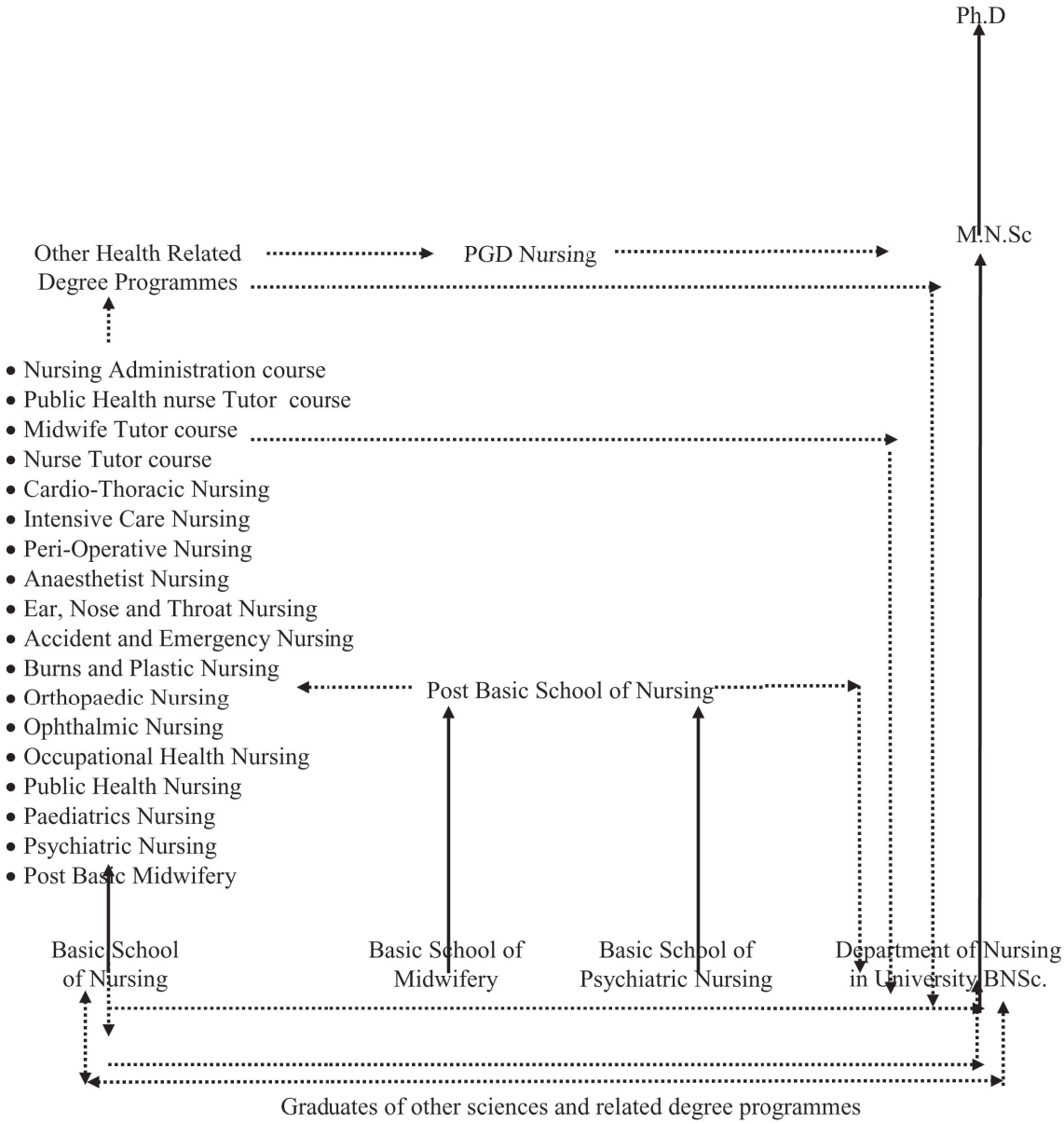
Pathways to education are those stages/processes of educational preparation students undergo before gaining requisite skills and competencies necessary to be registered to practice as a professional or a graduate of a specific discipline. Albatross is a burden, a hindrance and a clog in the wheel of progress. When those educational pathways are multiple and linear/parallel to each other it could create several challenges against growth and development of such profession/discipline. These multiple educational pathways in nursing [(1)] have expanded access to the profession for those seeking a license to practice as Registered nurses (RN's). These numerous entry points have also created uncertainty among students and practitioners alike about the desired end point, questionable efficiency and effectiveness of each pathway to developed nations and some of its peer European countries[(2)]. By 2013, Ireland and other European countries have instituted the BNSc. degree as the entry level for professional nursing reaching career goals.

Nursing is a profession that has had more than one level of educational preparation for more than fifty years. Nurses need to be adequately prepared academically, constantly trained and retrained to be able to utilise Evidence based Practice in the ever changing health care milieu. The move to degree is a landmark policy for nursing bringing England into line with other practice. The situation is different in Nigeria and that is the bane of this discourse. This paper examined the pathways to nursing education in Nigeria, the implications and the way forward.

PATHWAYS TO NURSING EDUCATION IN NIGERIA

The pathways of nursing education in Nigeria is characterised by multiple routes with multiple certificates that does not add up to a degree irrespective of the numbers of certificates and years spent acquiring such certificates. The nurse is at liberty to gather as many of these certificates as he deem fit at different intervals. These multiple pathways in nursing education in Nigeria includes:

The corresponding author :
Dr C. I. Ilo
Senior Lecturer, Department of Nursing Science
Nnamdi Azikiwe University, Awka
Anambra State Nigeria



1. Passing through the basic school of nursing to become Registered Nurse (RN), then taking up as many post basic nursing programme as possible, or obtain other health related degree, then a Post Graduate Diploma (PGD) in nursing OR go into the university through direct entry for the Bachelor of Nursing Science (BNSc) programme.

Figure 1 Schematic diagram of pathways to nursing education in Nigeria

2. Passing through the basic school of midwifery to become Registered Midwife (RM), then to the post basic school of nursing to become RN, then taking up as many post basic nursing programme as possible, OR other health related degree courses then a PGD in nursing OR go for the BNSc. programme.

3. Passing through the basic school of psychiatric nursing to become Registered Psychiatric Nurse (RPN), then to the post basic school of nursing to become RN, then taking up as many post basic nursing programme as possible, OR other health related degree courses then a PGD in nursing OR go for the BNSc. programme after RPN/RN.

4. Secondary school leavers with Senior Secondary School Certificate (SSSC) go through the Unified Tertiary Matriculation Examination (UTME) for five years BNSc. Programme.

5. Graduates of other science related disciplines

might come into nursing programme through any of these pathways or through direct entry into the BNSc. programme as a second career. It is at the point of BNSc. or PGD Nursing that those that wish to progress academically can proceed to the Masters in Nursing Science (M.N.Sc.) and/or Ph.D in Nursing Science.

Implications of multi-linear pathways to nursing education in Nigeria.

Non-existence of Nursing in National Education Policy

The place of basic nursing education in the Nigerian hierarchical education system remains a mirage. It has been noted [3] that virtually all documents from the Federal Ministry of Education (the apex body that statutorily takes responsibility for the regulation and management of education in Nigeria) are silent on the place of hospital-based nursing programmes in the Nigeria education system. This means that placement of the basic nursing education programmes were not contextualized either in the previous educational systems including the 6–3–3–4 or the newly introduced 9–3–4 system. This is rather not surprising as the administration of basic nursing education was placed under the Ministry of Health and not the Ministry of Education. In the national educational framework, all programmes are considered within the technical and professional subgroups with appropriate recognition of placement at different levels of programmes. The status of the hospital based basic nursing programme is neither defined nor the face value of its certificate quantified. This impedes realignment of nursing education with national and international educational reforms, development of professionalism and placement of nursing workforce in the scheme of things. The aftermath is the rather slow pace of academic progression of many of these hospital-based basic nursing programme graduates.

Duration of Nursing Education

The shortest education pathway to obtain a first degree in Nursing is the five years generic nursing programme which only a handful of nurses pass through that pathway. Majority of nurses in Nigeria start from the basic school of nursing programme and will have a minimum of eight years of schooling to obtain a first degree in nursing (those with multiple post basic qualification spend in excess of 10 years). This results in most nurses digressing and studying other disciplines, which is inimical to the growth and development of nursing professional practice in Nigeria. Few nurses end up with single qualification while a number of others end with double or multiple qualification(s).This impedes the growth of nursing profession as only a handful will take the pains of going to obtain a first degree in Nursing Science.

Shortage of BNSc. Nurses/Faculty

Report on Nursing Education [4] as well as health workforce reports to Congress for two decades [5], have concluded that there is a substantial shortage of nurses with BNSc. and higher education to meet current and future national health care needs. Nursing is the least educated health profession by far but the one experiencing the greatest expansion in scope of practice and responsibilities. A less well recognised consequence of the shortage of BNSc. nurses is a shortage of faculty which could have a long-term impact on national production capacity of nurses, nursing workforce and professionalism for the future. Accordingly [5] opined that a critical mass of nurse practitioners in Nigeria hold the registered nurse certificates. Ratio of nurses with BNSc. to the others might be about 1:20 as there are about 185 basic and post basic schools of nursing compared to just about 21 departments of Nursing Science in Nigeria [6; 7].

Ageing of Faculty

As the general population ages, so does the nurse faculty population. The latest available Association of American College of Nursing (AACN) [8] data indicate that the average age of nursing professors was 59 years and the average age of associate professors was 52 years [9]. This trend will result to increasing numbers of faculty retirements in the next decade; as many as 75% of the current nursing faculty are expected to retire by 2020 [10]. The case is not different here in Nigeria, as there are less than 10 professors in Nursing and most are already in their 60's all as a result of very long, complicated and tortuous pathways of nursing education.

Fragmentation of Nursing Profession

The existence of parallel educational pathways for nurses have resulted in professional fragmentation with varied interests via educational lines. This resulted in existence of various professional associations such as National Association of Nigerian Nurses and Midwives (NANNM), Professional Association of Trained Nurses of Nigeria (PATNON), Professional Association of Midwives of Nigeria (PAMON), Nigeria Association of Nurse Tutors, The University Graduate Nurse Association (UGONSA/GNAN), The Professional Health Visitors Association of Nigeria, Professional Association of Public Health Nursing Officers of Nigeria (PAPHNON), Nigeria Industrial Nurses Association, Guild of Registered Nurses of Nigeria etc. [11]. The existence of different trade unions/affiliates of nurses with different agenda and interests result in nurses finding it almost impossible to present a common front for their collective interest and as such act as a clog in the wheel of progress for nursing professionalism in the country. This have resulted in infighting, bickering and conflict of interests among nurses. This is evident as some older nurses neither mentor nor encourage younger nurses undergoing further studies to improve themselves in their workplace.

Poor public image/perception of nurses/nursing profession

The public image/perception of nurses is currently low in Nigeria vis-à-vis other professions particularly among health care professionals. This stem from the pattern of nursing education, where nursing is viewed as a career for those that are no do wells or cannot pass UTME examination into the university as a result of the continued proliferation of schools of basic and post basic nursing whose certificates irrespective of numbers do not add up to a degree. This has implications for the value ascribed to nurses, their services and the profession, both among other professionals and the general public. This denies the profession its rightful place in decision and policy making both in the health care delivery system and the society at large to the detriment of growth and development of the profession. Nurses are not involved in policy making even in the hospital board where they work as they are not placed at par with other health care professionals.

Poor attitude of nurses to continuing education

Nurses themselves are very slow in embracing university education thereby limiting their opportunities for progress and slow down the rate of improvement of care they render to patients [5]. An average nurse working with his RN/RM etc. might not border to proceed for a BNSc. degree so long as he is making his money practicing with his RN/RM. They might not be ready to dissipate their resources just to earn a BNSc. that might not put extra money into their pockets nor contribute to their career progression in their work places. This them seems as if continuing education is meant only for the nurses financial benefits ignoring the impact of improved academic preparation of the nurse in improving nursing care to patient.

Lack of incentives for higher education and qualification

With this trend of nursing education pathways and confusion sequel to it, there is improper placement of nurses in workplace and the salary not being commensurate with the qualifications. This is also a key issue why it is impossible for BNSc nursing graduates to be part of the internship programme which is embarked on for bridging the gap of theoretical knowledge with clinical practice on graduation for health care professionals. This trend could be frustrating for young nurses and have been a factor for nurses abandoning the profession for health and other professions such as medicine, medical laboratory sciences, medical rehabilitation, radiography, law and accountancy among others where they will be sure of their career pattern and be compensated in relation to their value in term of lifelong learning, continuing professional development and higher education. The salary of a senior lecturer with a PhD is less than that of a Chief Nursing Officer with RNM with or without a degree in which ever discipline he choose to study.

Restricted career pattern for nurses

In other professions there are multiple directorate and professionals can be promoted to the level of Permanent Secretaries. Ninety percent of nurses are stagnated as Deputy Director until they retire while other professionals are not limited in career progression. They have the opportunity of reaching the apex of their career in civil service. A good number of nurses are not willing to embark on higher

education in specific nursing areas, the establishment of the consultant status for nurses will remain a mirage. Experience and higher education in nursing will be the only means of actualising nurse consultant status.

The Way Forward

- The minimum entry requirement into professional nursing practice in Nigeria should be BNSc**.** The various entry pathways into the profession have been confusing to the public and to other health professionals.

- Incentives and support should be given to all Universities in Nigeria to start up Department of Nursing Science to take care of the teaming population of young persons and RN/RM that desire to get university education.

- All the department of Nursing in Nigeria should commence a part-time BNSc programme, and they should also by extension assist the Open University to commence nursing programme the way it should be. This will provide a flexible education for older nurses with substantial years of clinical practice to be able to obtain their BNSc. as soon as possible.

- Basic schools of nursing with requisite resources should be affiliated or assimilated into the BNSc. awarding institutions. This will involve a comprehensive curriculum over haul to ensure that the contents of the curriculum for these schools is same with the minimum benchmark as obtained in the university nursing programme.

- Increase scholarships, and institutional capacity awards for graduate nurse education at master's and doctoral levels within and outside the country. This will assist in bridging the human resources gap both in the universities and the clinical areas for the teaching-learning experiences of the student nurses.

SUMMARY

This paper examined the multi linear pathways to nursing education and its implication to the nursing profession in Nigeria. It also articulated the way forward away from this multi linear nursing education pathways which impedes the growth and development of nursing profession. Embracing university education for nurses will be of immense benefits to the nurses, nursing profession and other health care professionals that work with nurses and recipients of nursing services by improving health care outcomes.

CONCLUSION

The multi linear pathways to nursing education is an albatross, a burden and a clog in the wheel of progress to the growth of nursing and the professionalism of nursing in Nigeria. Streamlined and unitary nursing education pathway will ensure that nurse practitioners acquire the competencies necessary for continuous improvement of the quality and safety of healthcare systems—patient-centred care, teamwork and collaboration, evidence-based practice, quality improvement and safety. It will also ensure a career progression of all nurses and proper placement of nurses/ nursing profession both in the workplace and the society at large. Nursing education should foster this emphasis on professionalism.

Ethical- Not applicable.

Source of Funding- Self

Conflict of Interest - Nil

REFERENCES

1. Raines, C.F. & Taglaireni, M.E., (2008). Career pathways in nursing: entry points and academic progression. Online Journal of Issues in Nursing, 13(3), Manuscript
2. Willis Commission. (2012). Quality with compassion: the future of nursing education. Report of the Willis Commission on Nursing Education, London: Royal College of Nursing.
3. Ayandiran, E. O., Irinoye, O. O., Faronbi, J. O., & Mtshali, M. G. (2013). Education Reforms in Nigeria: How Responsive is the Nursing Profession? International Journal of Nursing Education Scholarship 10 (1), 1–8.
4. Benner, P., Sutphen, M., Leonard, V. & Day, L. (2010). Educating Nurses: A Call for Radical Transformation. San Francisco, CA; Jossey-Bass.
5. Ojo, A.O. (2010). The challenges of best practices and standards in nursing in Nigeria

Inaugural lecture series. (4th ed.), Igbenedion University, Okada Edo State.

6. National Universities Commission [NUC] (2015). Result of Accreditation of undergraduate programmes taught in Nigeria Universities: 1990-2015. Retrieved December 30, 2015 from http://nuc.edu.ng/accreditation-results/
7. Nursing and Midwifery Council of Nigeria [NMCN]. (2010). List of approved schools of nursing, midwifery, post basic nursing programmes and departments of nursing in Nigeria and their accreditation status as at 31st July, 2010. Retrieved December 5, 2015 from http://www.nmcnigeria.org/Approved_Schools.pdf
8. American Association of Colleges of Nursing. [AACN]. (2005). White paper: Faculty shortages in baccalaureate and graduate nursing programmes: Scope of the problem and strategies for expanding the supply. Retrieved December 15, 2015 from www.aacn.nche.edu/Publications/WhitePapers/FacultyShortages.htm
9. Fang D, Hutt A, & Bednash, G. D. (2008). 2007–2008 Enrolments and Graduations in Baccalaureate and Graduate Programmes in Nursing, Washington, DC: American Association of Colleges of Nursing (AACN).
10. National League for Nursing [NLN] (2011) Academic Progression in Nursing Education A Living Document from the National League for Nursing NLN Board of Governors Retrieved December 18, 2015 from http://www.nuc.edu.ng/pages/universities.asp.
11. Ajibade, B.L. (2012). Nursing in Nigeria: The journey so far and way forward. A paper presented at the 6th biennial and 5th quadrennial delegate conference organized by The National Association of Nigeria Nurses and Midwives (NANNM) on 21st November, 2012 at the Grayland Cultural Centre, Yenogoa Bayelsa State. Retrieved December 15, 2015 from http://nursingworldnigeria.com/nursing%20documents.doc

DOI Number: 10.5958/0974-9357.2016.00092.1

Spiritual Development among Residential Students of a Selected Nursing College in Kerala

Lilly Joseph (LillykuttyM.J)[1], Rebecca Samson [2]

[1]*Principal, Lourdes College of Nursing Ernakulam, Kochi, Kerala,*
[2]*Dean, Pondicherry Institute of Medical Sciences, Pondicherry*

ABSTRACT

Spirituality captures significant aspects of a person's perspective and has been well documented within many branches of knowledge as powerful and effective for psychosocial development. A descriptive exploratory cross sectional study was conducted to assess the spiritual development among the residents of a nursing college in Kerala. The researcher used a convenient sampling technique to recruit the participants prior to a psycho-spiritual enlightenment programme. Two hundred and eighty (280) female residents of the nursing hostel ranging in age from 17 to 27 years completed the spiritual assessment inventory rating scale. Result shows 92.1% have high spirituality and 7.9 % have low spirituality. The researcher has analyzed different aspects of spirituality like Awareness (M=11.95, SD=0.211), Grandiosity (M=1.635, SD=0.482), Impression management (M=1.646, SD=0.478), Realistic acceptance (M=1.88, SD=0.314), instability (M=1.43,SD=0.495) and disappointment (M=1.31,SD= 0.49). Future research should investigate the effectiveness of spiritual enlightenment programmes and its association with psycho-spiritual development.

Keywords: *Spiritual development, residential students, nursing college*

INTRODUCTION

Spiritual well-being is an assertion of life in relationship with God, the self, others, the community, and the environment that nurtures and celebrates wholeness[1]. Spirituality is a concept which embraces all of an individual's life[2], more comprehensive than religion[3] and involves both interpersonal relationships and those about the meaning of life, particularly at times of crisis and illness[4]. Spiritual care is a central element of holistic nursing[5]. Holism cannot exist without consideration of the spiritual aspects that create individuality and give meaning to people's lives[6].

Need for the study

Spiritual well-being is an aspect of mental health that significantly contributes to the quality of life for many individuals. Human being, with variety of dimensions is the most interesting (extraordinary) creation of God[7].

Several researchers have explored the importance of spirituality within college-aged students. Students in college represent a particularly important sample since it is in college that 17 to 22 year olds practice and hone their abstract, deductive reasoning skills. College can also represent times of crisis or choice for those students who are just beginning to practice their values in light of increasing autonomy and freedom of choice[8]. There is a significant correlation between spiritual well-being and psychological well-being among college students. Since spirituality and overall life satisfaction seem to be positively related, it is reasonable to hypothesize that spirituality may also relate to development among college students[9].

According to the literature, currently there is no assessment for spiritual development of nursing students[10]. Although many researchers developed an interest in the spirituality among nursing students, no studies have emphasised the levels of spirituality among residential students. Little has been known about spiritual development and spirituality perspective among nursing students who stay in hostels for their course of study and growth as mature

human beings.

PURPOSE OF THE STUDY

The purpose of this study was to assess the spiritual development among residential students of a selected nursing college in Kerala. A nursing hostel represents an environment for prayer, discipline, value oriented instructions, self motivated study habits, autonomy and freedom of choice. Assessing the spiritual development among nursing students who are staying in a hostel is a sure way to take of care of their spiritual health, moral development and life satisfaction.

Statement of the Problem

A study to assess the spiritual development among residential students of a selected nursing college in Kerala

Objectives

1. To assess the spiritual development measured by spiritual assessment inventory

2. To determine the association between spiritual development and selected demographic variables

Instrument

A spiritual assessment inventory, rating scale was used to gather information. The Spiritual Assessment Inventory[12] (SAI; copyright Todd W. Hall, Ph.D. & Keith J. Edwards, Ph.D.) contained 54 items, to assess the spiritual and religious development of the students. The inventory has 5 factors: awareness of god (20 items) realistic acceptance of God (7 items), grandiosity in relationship with God (7 items), instability in relationship with God (8items). The scale also includes an impression management component (5 items) used to gauge the reliability of the respondent's answers.Spiritual assessment inventory is a 5 point scale: 1 (not at all true), 2 (slightly true) 3 (moderately true), 4 (substantially true) and 5(very true). This instrument has been widely used and its reliability and validity are well documented.

Data Collection Procedure

This is a descriptive explorative cross sectional study conducted on residential nursing students of a selected nursing college in Kerala. Data were gathered through a self-reported data collection instrument before the psycho-spiritual enlightenment programme conducted for all the students of a nursing college in 2015. The aim was to assess the spiritual development among students at a college. A convenient sampling technique was used to recruit the participants. The participants were full time residents staying in a hostel attached to a nursing college. Total number of participating students was 280, of which 76 were GNM students, 158 BSc nursing students and 46 students were from Post Basic BSc Nursing Course.

FINDINGS

The statistical analysis was performed using the SPSS software version. The data were analysed using descriptive statistics (frequency, percentage, mean, standard deviation). The chi-square test was used to check for associations. Significance was set at p = 0.05, with 95% confidence interval. In this present study age, gender, nursing programme, practicing faith, religious affiliation, duration of stay in hostel and satisfaction with religious practices were considered for the analysis of the study.

Table 1: Distribution of subjects based on demographic characteristics

variable	Category	f	n=280 %
Age	17- 23	262	93.5%
	24- 27	18	6.42%
Duration of hostel stay	0-2 yrs	146	52.1%
	3- 4 yrs	123	43.9%
Nursing Programme	GNM	76	27.1%
	PB B.Sc.	46	16.4%
	B.Sc.	158	56.4%
Practicing faith	Yes	275	98.2%
	No	5	1.78%
Religious affiliation	Muslim	7	2.5%
	Hindu	33	11.7%
	Christian	240	85.7%
Religious satisfaction	Yes	237	84.6%
	No	43	15.3%

Table 1 shows that a response rate of 93.3% (n=280 out of 300) was achieved. There were 76 (27.1%) GNM students, 158 (56.4%) BSc nursing students and 46

(16.4%) Post Basic BSc nursing students. Most of the study subjects were Christians (85.7%, n=240) and remaining study subjects were included in Hindu (11.7%, n=33) and Muslim (2.5%, n=7). The age of the respondent's ranged from 17 to 23 years 93.5% (n=262) and 24 to 27 years 6.42% (n=18). The duration of students hostel stay ranged from 0 to 2 years 52.1% (n=146), 3 to 4 years 43.9% (n=123). With respect to practicing religious faith 98.2% (n=275) declared themselves practicing believers of a religion and 1.78% (n=5) declared not practicing any religion. 84.6% (n=237) declared themselves satisfied with religious practices but 15.3% (n=43) were not satisfied in their religious practices.

While assessing the spiritual development of the resident student of nursing college 95.3% of them have good awareness of God and 36.4% have less awareness. Regarding the grandiosity in relationship with God 63.6% has high grandiosity and 36.4% have low grandiosity. While with respect to realistic acceptance of God, 88.9% have good realistic acceptance of God. 11.2% have poor in this area. On the view of instability in the relationship with God 57.5% of study subject were highly instable in this relationship but 42.5% have maintained low instability in this same relationship. Disappointment in the relationship with God is another spiritual characteristic where 31.0% have highly disappointed and 68.7% have less disappointment. While considering the impression management component 35.4% have poor rating in this area and 64.6% have good impression management skills.

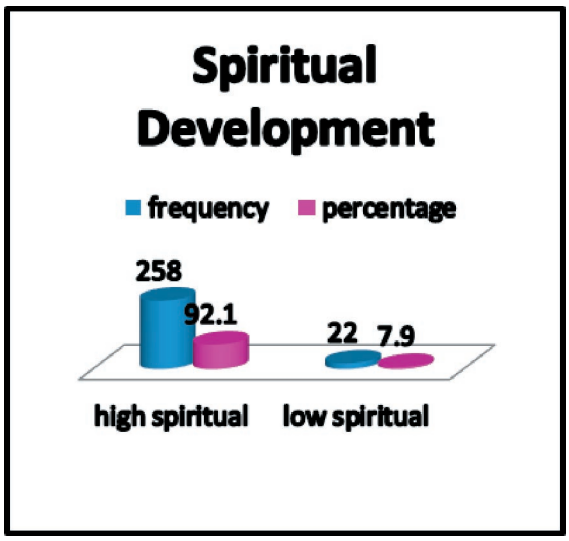


Figure 1: Frequency and percentage distribution of spiritual development

As revealed by figure 1 out of 280 samples 258 (92.1%) have high spirituality and 22(7.9%) of them has low spirituality.

Table 2: Frequency and percentage distribution of spiritual characteristics (n= 280)

Characteristics	Scale	f	%	Mean	SD
Awareness	Low	13	4.7	11.953	0.211
	High	266	95.3		
Grandiosity	Low	102	36.4	1.635	0.482
	High	178	63.6		
Impression management	Poor	99	35.4	1.646	0.478
	Good	181	64.6		
Realistic acceptance	Poor	31	11.2	1.889	0.314
	Good	249	88.9		
Instability	Low	119	42.5	1.4250	0.495
	High	161	57.5		
Disappointment	Low	193	68.7	1.310	0.463
	High	87	31.0		

Table 2 explains that while assessing the spiritual development of the resident students of nursing college, 95.3% of them have good awareness about spirituality and 36.4 % have less awareness. Grandiosity is another spiritual characteristics were 63.6% have high grandiosity and 36.4% have low grandiosity, 64.6% have good impression management were as 35.5% have poor impression management about spirituality. Results shows that 88.9% have good realistic acceptance and 11.2 % have poor, 57.5% have high instability and 42.5% have low instability with spirituality. While 31% have high disappointment with God, 68.7 % lave low disappointment.

Table 3: Analysis of the association of spirituality with selected demographic variables (n= 280)

Demographic variable	Category	Table value	df	χ^2 value
Age	17- 23	3.84	1	0.14_{ns}
	24- 27			
Duration of hostel stay	0-2 years	3.84	1	0.04_{ns}
	3- 5 years			
Nursing Programme	GNM	5.99	2	0.97_{ns}
	PB B.Sc.			
	B.Sc.			
Religious faith	Yes	3.84	1	0.43_{ns}
	No			
Religious affiliation	Muslim	5.99	2	0.82_{ns}
	Hindu			
	Christian			
Religious satisfaction	Yes	3.84	1	0.99_{ns}
	No			

p = 0.05 level of significance; ns = non significa nt

Table 3 shows the association of spiritual development with selected demographic variables. Here none of the calculated chi square values are higher than the table value at 0.05 level of significance. Hence the result reveals that no particular spiritual area has any association with selected demographic variables. So, the given particular spiritual characteristics not have any association with selected demographic variables.

DISCUSSION

The study aimed to assess the spiritual development of students and to find the association of spiritual development with demographic variables. The researcher has analyzed different aspects of spirituality like awareness, grandiosity, impression management, realistic acceptance, instability and disappointment. The results show that 92.1% have high spirituality and 7.9% have low spirituality and spiritual development has no association with any demographic variables. This result of the present study surprises the finding of a descriptive – comparative study conducted on nursing students of three schools of nursing and midwifery as 98.8% of the first year and 100% of the fourth year students had moderate levels of spiritual well-being[9]. This study also provides insights on to the level of nursing students' spiritual development and areas to be considered for more attention and care. Future researches can be done to find the effectiveness of spiritual development program and a comparative study can be done to assess the spirituality of resident and non- resident students. Moreover, the researcher suggests more studies on identifying the spiritual development facilitators and barriers. The findings of the study are to provide nursing faculty with tools that may be used to develop spiritually knowledgeable nursing students who can overcome barriers to providing spiritual care to patients.

CONCLUSION

The present study concludes that the residents of selected nursing colleges in Kerala have spiritual development in high and low levels measured by Spiritual Assessment Inventory. The values related to the aspects in the measuring instrument are not associated with any of the demographic variables of the participants. The results thus give a direction towards our efforts to enhance the moral development and life satisfaction among the nursing students. When nurses are educated on spiritual meaning, their perspective of spirituality may deliver spiritual care for patients.

Acknowledgement: We would like to acknowledge nursing students who participated in this study.

Conflict of Interest: There is no professional, personal or family allegiance, bias, inclination, obligation or loyalty which may in any way affect the objectivity, independence or impartiality in making research.

Source of Funding: This research has no specific grant from any funding agency in the public, commercial sectors. It was supported by the researchers themselves.

Ethical Clearance: The purpose of the study and procedures were explained to residential students. Participants were informed of their right not to participate and withdraw at any time without prejudice. Informed consent was taken from the

nursing students and no identifying data of the students was revealed. The study was approved by institutional ethics committee.

REFERENCES

1. Tiew LH, Creedy DK. Development and preliminary validation of a composite Spiritual Care-Giving Scale. Int J Nurs Stud. 2012 Jun; 49(6): 682-90.
2. Spiritual development of nursing students: developing competence to provide spiritual care to patients at the end of life. Jour Nurs Educ. 2006 Sep; 45(9):365-70.
3. Hernandex KM. Spirituality and moral development among students at Christian college, United States. 41-44.
4. Richter R.J. Correlation of psychological well-being and Christian spiritual well-being at small Christian liberal arts college in the urban Midwest. Charis, 2(1), 39-46.
5. Hall TW, Edwards KJ. The spiritual assessment model and measure for spiritual development. Journal of Scientific study of Religion.1996.
6. Chamberlain k, Zika S. Religiosity, life meaning and well-being: Some relationships in a sample of women. Jour Scientific study of Religion. 27 411-420.
7. Claudia de Souza Tomasso Ideraldo Luiz Beltrame Giancarlo Lucchetti. Knowledge and attitudes of nursing professors and students concerning the interface between spirituality, religiosity and health. 2011 Sep-Oct.;19(5):1205-13.
8. Baldacchino, D.R.2008. Teaching on the spiritual dimension in care: the perceived impact on undergraduate nursing students. Nurse Education Today. 28:501-12.
9. Mojgan A. Nursing students' spiritual well-being, spirituality and spiritual care. Iran J Nurs Midwifery Res. 2014 May-Jun; 19(3): 242–247.
10. Patricia E.Mahon Graham (2008). Nursing students' perception of how prepared they are to assess patients' spiritual needs. Doctoral thesis. available at Google, accessed on 30-3-2016.

DOI Number: 10.5958/0974-9357.2016.00093.3

Effect of Instructional Programme on Knowledge of Adolescent Girls Regarding Reproductive Health

Beena M R

Associate Professor, Govt. College of Nursing, Medical College, Thiruvananthapuram

ABSTRACT

Adolescence is a period of active growth and development – physical, social and emotional. There is a substantial lacuna in the knowledge about reproductive health among adolescent girls.

The aim of present study was to assess the effect of Instructional programme on knowledge of adolescent girls regarding reproductive health.

Method: A quasi experimental research design of one group pre-test post-test was used for the present study. Data were collected from adolescent girls and multi stage cluster sampling technique was used to select samples. The researcher developed an Instructional programme (video assisted) with a self administered teaching module on knowledge regarding reproductive health.

Result: A significant difference between mean pretest – post test score was found ($p<0.001$).

Conclusion: The findings of the study revealed that there was significant increase in knowledge of adolescent girls regarding reproductive health. Hence it is concluded that the Instructional programme is effective in improving knowledge of adolescent girls regarding reproductive health.

Keywords*: Reproductive health, Adolescent girls, Instructional programme.*

INTRODUCTION

Adolescence is a period of dynamic change representing the transition from childhood to adulthood that begins at puberty and are significant human resource that needs to be given opportunity for holistic development towards achieving their full potential[1].

Adolescence comprised 20% of world's population. In India there are 190 million adolescents comprising 21% of total population. Adolescent girls (10-19 years) comprised about 22% of women in India[2]. This period is very crucial since these are the formative years in the life of an individual where the major physical, psychological and behavioural changes takes place[3]. A study conducted to assess reproductive health problems and health seeking behaviour among adolescents in India showed that the mean age of menarche among adolescent girls was 10.8 years and they mainly reported problems related to menstruation, excessive vaginal discharge, itching of genitals and urinary complaints[4]. The study indicated that a comprehensive package of health and life skill education is essential to improve their reproductive health.

In a study conducted in Thiruvananthapuram showed that 92% of adolescent girls had poor knowledge about problems due to irregular periods and 70% were aware of Acquired immuno deficiency syndrome (AIDS) and Sexually Transmitted Infections (STIs)[5]. Another study conducted at Mumbai among adolescent girls showed that knowledge regarding contraceptive methods is extremely low and 85.6% of girls did not have any information about STIs and education intervention strategy is useful in improving knowledge of students in relation to sex, HIV/AIDS and STIs[6]. In order to lead a healthy and responsible life and protect from reproductive health problems they need to be knowledgeable about themselves and need adequate information about physical and psychological changes that takes place

during puberty, menstruation and pregnancy.

Objectives

1. Assess the level of knowledge of adolescent girls regarding reproductive health.

2. Evaluate the effect of Instructional programme on knowledge of adolescent girls regarding reproductive health.

HYPOTHESIS

There will be a significant difference in knowledge regarding reproductive health among adolescent girls after implementation of Instructional programme.

MATERIALS & METHOD

Research approach: Quantitative approach.

Research design: One group pretest - posttest design.

O_1 x O_2

O_1 - pre-test

X - Instructional programme (Video assisted)

O_2 - Post-test

Variables

Independent variable: Instructional programme.

Dependent variable: Knowledge of adolescent girls regarding reproductive health.

Setting: Higher Secondary schools in Thiruvananthapuram Corporation.

Population: Adolescent girls of age group 17-19 years.

Sample: Adolescent girls of age group 17-19 years in selected Higher Secondary Schools of Thiruvananthapuram Corporation.

Sample size: 120

Sampling technique: Multistage cluster sampling

Tools and Technique:

Tools: Interview schedule.

Section A: Socio-demographic data

Section B: Questions related to knowledge of adolescent girls regarding reproductive health.

RESULTS

In the present study majority of subjects (73%) belonged to Hindu religion. 79.14% of adolescent girls were coming from nuclear family and 20.86% were from joint families. Among the subjects 65.8% had no previous information about reproductive health and 74.16% of adolescent girls had exposure to more than one medium of communication. Majority of adolescents girls (76.7%) feel secure at their own home itself. 21.67% of subjects have complaints of irregular menstruation.

1. Knowledge of adolescent girls regarding reproductive health.

Table 1: Mean and standard deviation of knowledge score of adolescent girls regarding reproductive health

Area of knowledge	Mean	SD	Mean % out of total score
Physical changes during adolescence	2.83	1.22	47.17
Menstrual hygiene	5.61	1.72	40.07
Marriage, life and pregnancy	1.93	1.25	20.8
Adolescent nutrition	1.13	0.65	51.5
AIDS/STIs	8.97	6.78	56.06

From the above table the mean percentage score related to knowledge regarding marriage, life and pregnancy was below 40% where as on all other aspects the mean percentage score was average ie., above 40%.

II Effect of Instructional programme on knowledge of adolescent girls regarding reproductive health

Table 2: Mean, standard deviation and 't' value showing effect of Instructional programme on knowledge of adolescent girls regarding physical changes during adolescence

Time of Assessment	Knowledge		't'	p
	Mean	SD		
Pretest	2.83	1.22	12.34	$p < 0.01$
Posttest	5.73	0.52		

The increase in mean score after the administration of intervention was found to be significant ($p<0.01$).

Table 3: Mean, standard deviation and 't' value showing effect of Instructional programme on knowledge regarding menstrual hygiene

Time of Assessment	Knowledge		't'	p
	Mean	SD		
Pretest	5.61	1.72	20.86	p < 0.01
Posttest	12.40	1.45		

The mean score was increased from 5.61 to 12.40 after intervention and was found to be statistically significant (p<0.01).

Table 4: Mean, Standard deviation and 't' value showing effect of Instructional programme on knowledge regarding marriage, life and pregnancy

Time of Assessment	Knowledge		't'	p
	Mean	SD		
Pretest	1.93	1.25	15.272	P<0.001
Posttest	4.67	0.61		

The mean score regarding knowledge on marriage, life and pregnancy was found to be significant (p<0.001).

Table 5: Mean, Standard deviation and 't' value showing effect of Instructional programme on knowledge regarding adolescent nutrition

Time of Assessment	Knowledge		't'	p
	Mean	SD		
Pretest	1.13	0.65	7.71	p < 0.001
Posttest	1.96	0.18		

Table 6: Mean, Standard deviation and 't' value showing effect of intervention on knowledge regarding STIs/AIDS

Time of Assessment	Knowledge		't'	p
	Mean	SD		
Pretest	8.97	6.78	18.84	p < 0.001
Posttest	14.59	1.87		

The increase in mean score after administration of intervention was found to be significant (p < 0.001).

DISCUSSION

In the present study 65% of adolescent girls have average knowledge regarding reproductive health. After implementation of Instructional programme there was significant improvement in knowledge regarding physical changes during adolescence (p < 0.01) menstrual hygiene (p < 0.01). Also there is significant improvement in knowledge regarding marriage, life and pregnancy (p < 0.001) adolescent nutrition (p < 0.001) and STIs/AIDS (p < 0.001). The present study indicated that a comprehensive package of instructional programme are essential for the holistic development of adolescents, and they can lead a healthy future life.

CONCLUSION

In India, reproductive health and sex education has still not reached a large majority of adolescents and youths. Lack of awareness is responsible for a number of problems in their life. So health planners and health care workers should take necessary measures to improve knowledge and perception of adolescent girls and help to take care of their own health and protect them from risk behaviour.

Acknowledgement: The investigator gratfully acknowledge the active participation of adolescent girls and Principal and Teachers for their cooperation in supporting the study.

Conflict of Interest : None

Source of Funding : Nil

Ethical Clearance: Ethical clearance from Human Ethics Committee, Medical College, Thiruvananthapuram

REFERENCES

1. Dhingra R, Kumar A. Knowledge and Practice related to menstruation among adolescent girls. Etho – Med. 2009; 3(1): 143-48.
2. INCLEN International Clinical Epidemiology network. 1998-2001. Available from www.inclen.org. accessed on 20th December 2010.
3. Kamath R, Ghosh D, Lena A, Chandrasekharan V. Menstrual hygiene among rural and urban adolescent girls in Udupy Thaluk, India.

Global Journal of Medicine and Public Health. GJMEDPH. India, 2013; Vol 2; Issue 4.

4. Joshi BN, Chauhan SL, Donde UM. Reproductive health problems and health seeking behavior among adolescents in urban India. Indian Journal of Paediatrics. June 2006; 73(6):509-513.
5. K. Jyothi Kamalam, B Rajalekshmi. Reproductive awareness among college girls. Indian Journal of Social work. Vol. 66; issue 4. Oct 2005.
6. Leena Abraham. AIDS awareness campaigns, sex education programmes: the shaping of sexuality awareness among college students. Indian Journal of Social work. Volume 6, issue 4, Oct. 2005.
7. Indian Council of Medical Research (2005-2006). Knowledge and Practice of Adolescent girls in reproductive health. ICMR annual report. New Delhi. Available at: http:// www.icrmr.nic.in.

DOI Number: 10.5958/0974-9357.2016.00095.7

HIV/AIDS: Knowledge and Attitude among Auto Rickshaw Drivers in Chhattisgarh

Naushad Ali[1], Jaita Mondal Ghosh[2]

[1]MSc in Community Health Nursing; In-charge Staff in Casualty; Apollo BSR; Nehru Nagar; Bhilai; Chhattisgarh,
[2]MSc Community Health Nursing; Associate Professor; Maitri College of Nursing; Anjora; Durg; Chhattisgarh

ABSTRACT

Introduction: Human Immunodeficiency Virus infection and Acquired Immune Deficiency Syndrome (HIV/AIDS) is a disease spectrum of the human immune system with a high prevalence rate. The number of HIV/ AIDS cases recorded per month was 182 in 2009, 190 in 2010, 213 in 2011 and 242 in 2012. In 2013-14, the highest number of HIV positive cases was detected in Raipur, Durg and Bilaspur. Among 9,825 people tested in Raipur, 466 were found to be HIV positive.

Methodology: A descriptive study was done to assess the knowledge and attitude on "HIV/AIDS" among Auto Rickshaw Drivers (ARDs). Data were collected from 100 ARDs from old &new bas stand, railway station area in Durg (C.G.) by self administered questionnaire. The reliability of the knowledge questionnaire (r=0.86) and attitude scale (r=0.7) was established. The pilot study was conducted on 20 samples and was found feasible. Analysis of data was done by using inferential and descriptive statistics.

Result: Result of the study denotes that mean age of ARDs was 33.1years (±7.28). Mean knowledge score on HIV/ AIDS of ARDs was 6.70 (±1.89) but mean score on myths on HIV/ AIDS was 9.33 (±1.01). Overall mean knowledge score was 16.03 (±2.43). Majority of the ARDs had good knowledge (72%). Mean attitude of ARDs was 36.2 (±5.03). Majority (87%) of ARDs had fair attitude only towards HIV/AIDS disease/ patient. There was significant correlation found between knowledge and attitude ($p<0.05$) which denotes if knowledge will be increased attitude level will be increased and vise versa.

Keywords: *HIV/ AIDS; ARDs; Knowledge; Attitude; Chhattisgarh.*

INTRODUCTION

Among 8.3 million AIDS infected cases in Asia, HIV load in India stands close to 5.1 million, where the prevalence varies by state. India stands World No. 2 in prevalence of AIDS with six high priority states in country and Rajasthan hitting the top list approximately 80% of AIDS infections in India are acquired heterosexually.[1]

The number of HIV/AIDS cases recorded per month was 182 in 2009, 190 in 2010, 213 in 2011 and 242 in 2012. In 2013-14, the highest number of HIV positive cases was detected in Raipur, Durg and Bilaspur. Among 9,825 people tested in Raipur, 466 were found to be HIV positive. Similarly, in Durg and Bilaspur, a total of 15,055 and 20,718 were tested and 298 and 288 were found HIV positive respectively. Since 2008, testing centers have more than doubled from 52 to 111 in 2013. There is a need for people with HIV to lead a normal life and contribute to the society, regardless of their infection.[2]

HIV is transmitted primarily via unprotected sexual intercourse (including anal and oral sex), contaminated transfusions, hypodermic, and from mother to child during pregnancy, delivery, or breastfeeding. Some bodily fluids, such as saliva and tears, do not transmit HIV. Prevention of HIV

Correspondence author:
Mr. Naushad Ali
Email ID: naushad.ali138@gmail.com
Mobile No.: 09827200138

infection, primarily through safe sex and needle-exchange programs, is a key strategy to control the spread of the disease. There is no cure or vaccine; however, antiretroviral treatment can slow the course of the disease and may lead to a near-normal life expectancy. While antiretroviral treatment reduces the risk of death and complications from the disease, these medications are expensive and have side effects.[3, 4, 5, and 6]

Auto rickshaw drivers are a unique segment, in that by virtue of their work they came into contact with large number of people and can therefore act as agents spreading key messages about HIV/AIDS to the general public. Based on the revised estimates, a cross- sectional community based survey was done to assess the awareness regarding HIV/AIDS among Auto rickshaw drivers. Statistical Analysis was performed by Percentages & Chi Square test. Out of total 150 Auto rickshaw drivers, 96 (64.0%) had heard about HIV/AIDS. Awareness level was found increased with increase in educational status. Out of 96, 74.2% drivers knew that unprotected sex is the main mode of transmission. TV (63.0%) was the common media as source of information. Only 36.2% knew that the disease is not curable.[7]

Another cross sectional study was done to assess the level of knowledge regarding HIV/AIDS among 600 Auto rickshaw drivers. Statistical Analysis Percentages, Chi Square, Odd's Ratio were used to analysis data. Out of total 600 Auto rickshaw drivers, 384 (64.0%) had heard about HIV/AIDS. Awareness level increased with increase in educational status. Out of 384, 74.2% drivers knew that unprotected sex is the main mode of transmission. TV (63.0%) was the common media as source of information. Only 36.2% knew that the disease is not curable. Present study was done to assess knowledge and attitude of auto rickshaw drivers on "HIV/AIDS" and to find out the correlation between knowledge and attitude.[8]

HYPOTHESIS

H0: There will be no significant association between knowledge and attitude on "HIV/AIDS" among auto rickshaw drivers.

METHODOLOGY

A descriptive study was done to assess the knowledge and attitude on "HIV/AIDS" among Auto Rickshaw Drivers (ARDs). Data were collected from 100 ARDs from old &new bas stand, railway station area in Durg (C.G.) by self administered questionnaire. Samples were selected by non probability convenience sampling. Structured knowledge questionnaire and five point likert scale was used to collect data. Validity of tools was established by various experts (CVI=1). The reliability of the knowledge questionnaire (r=0.86) and attitude scale (r=0.7) was established. The pilot study was conducted on 20 samples and was found feasible. A formal permission was obtained from the central authority of auto rickshaw drivers association Durg (C.G.) and participants consent was taken before collection of data. Analysis of data was done by using inferential and descriptive statistics.

RESULT

Table 1: Describing age of sample **n=100**

Mean	Median	Mode	Std. Deviation	Minimum	Maximum	Range
33.1	32	28	±7.28	20	52	32

Data represents in table 1 describes that mean age of ARDs was 33.1years (±7.28), median 32 and mode 28.

Ninety four percent of them stay with their wife. Those who were not staying with their wife, 5% of them used to go to prostitution and have multiple sex partners. It was found that they used to go to prostitution for mean 3.5 (±1.29) days per month. Eighty five percent of them have physical relationship with the women other than their wife. Majority of them (73%) use condom while having intercourse. Only 10% received blood transfusion in life and it was from authorized donor only. ARDs used to stay out of home at night is 2.53 (± 4.30) night. Mean year of experience of auto driving was 5.77 (± 3.66) years and their mean working hours per day are 9.66 (± 1.68) hours. Majority of them (94%) had previous knowledge on HIV/AIDS.

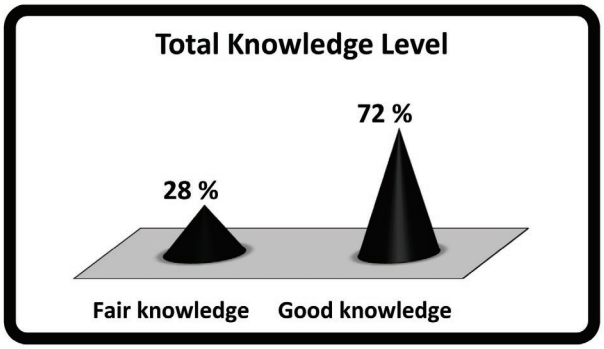


Figure 1: Cone diagram representing total knowledge level

Figure 1 shows that the majority of the ARDs had good knowledge 72% whereas 28% had fair knowledge.

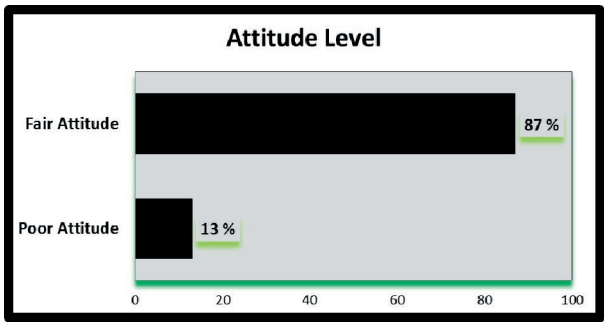


Figure 2: Bar diagram representing attitude level

Figure 2 shows that majority (87%) of ARDs had fair attitude and no one had good attitude towards HIV/AIDS disease/ patient.

Table 2: Correlation between Knowledge and Attitude n=100

Test of significance: Pearson's Correlation

	Mean	SD	r value	p value
Knowledge	16.03	± 2.435	0.298	0.003*
Attitude	36.20	± 5.04		

*Significant at 0.05 Level of significance

Table 2 denotes that there was significant correlation between knowledge and attitude ($p<0.05$). That shows if knowledge level will be increased, attitude level will be increased and vice versa. Thus null hypothesis (H0) was rejected and alternate hypothesis was accepted.

DISCUSSION

A cross- sectional community based survey was done to assess the awareness regarding HIV/ AIDS among Auto rickshaw drivers. Auto rickshaw drivers were chosen by universal sampling method interviewed during study period. Statistical Analysis was performed by Percentages & Chi Square test. Out of total 150 Auto rickshaw drivers, 96 (64.0%) had heard about HIV/AIDS. Awareness level was found increased with increase in educational status. Out of 96, 74.2% drivers knew that unprotected sex is the main mode of transmission. TV (63.0%) was the common media as source of information. Only 36.2% knew that the disease is not curable.[7] Present study was also done to assess the knowledge along with attitude on HIV/AIDS among auto rickshaw drivers as sample as same in the above study. Statistical Analysis was performed by Percentages. Out of total 100 Auto rickshaw drivers, 94% had previous knowledge on HIV/AIDS.

The level of Knowledge regarding HIV/AIDS in Auto rickshaw drivers was assessed among 600 Auto rickshaw drivers. Out of total 600 Auto rickshaw drivers, 384 (64.0%) had heard about HIV/ AIDS. Awareness level increased with increase in educational status. Out of 384, 74.2% drivers knew that unprotected sex is the main mode of transmission. TV (63.0%) was the common media as source of information. Only 36.2% knew that the disease is not curable.[8] Present study was also done among 100 ARDs to assess their knowledge level on HIV/ AIDS. Majority of them (76%) new mode of transmission of HIV/AIDS is unprotected sex; even they were aware about the common symptoms of HIV/ AIDS patients (81%). Eighty nine percent of them were aware about the diagnostic test of HIV/ AIDS. Though maximum of them did not know about the therapy used to treat it (68%) but were sure about how long a HIV/ AIDS patient should continue the medicines (75%).

CONCLUSION

Present study concludes that the knowledge score among Auto rickshaw drivers of Durg (C.G.) regarding HIV/AIDS was good and attitude level was fair. Study showed that there was positive correlation between knowledge and attitude which means ARDs with good knowledge on HIV/AIDS should have good attitude regarding toward HIV/AIDS patient.

RECOMMENDATION

- This study can be replicated on a large sample there by findings can be generalized.
- Similar study can be conducted in different settings and different target population.
- A similar study can be done in the large group of ARDs.
- A future study can be conduct in rural setting.
- A study can be conducted to assess the attitudes and coping strategies of auto rickshaw drivers with HIV/AIDS.

Ethical Consideration: A formal permission was obtained from the central authority of auto rickshaw drivers association Durg (C.G.) and participants consent was taken before collection of data.

Acknowledgement: Authors are grateful to Maitri Educational Society, Auto Rickshaw Drivers Association Durg (C.G.) and participants to permit to conduct the study.

Funding: Self

Conflict of Interest: Nil

REFERENCES

1. WHO, "Global programme on AIDS" pp No. 1-10.
2. NACO.HIV/AIDS epidemiological Surveillance & Estimation report for the year 2005.
3. Allender, Spradley. Community health Nursing, 5TH ed place of publication, Lippincott; 2004, p No.270.
4. Basavanthappa B.T Nursing Research. 1st ed. New Delhi: jaypee Brothers; 1998. p No.93- 110, 127-135.
5. Neelam Kumari Essentials Of Community Health Nursing 1st ed. Pee Vee Book. 2011.p 335-347
6. Potter Perry, Fundamental of Nursing, 5th ed. New Delhi. Hercourt India Pvt.2001 p 530-532.
7. Bawa MS, Patil AR. Awareness about HIV/AIDS among Auto Rickshaw Drivers at Field Practice Area of an Urban Health Centre at Mumbai, Maharashtra. International Journal of Health Sciences and Research (IJHSR) 2014; 4(5): 21-24.
8. Singh G, Girdha S, Gall P, Soni R, Satija M, Sharma S. HIV/AIDS Awareness Of Auto Rickshaw Drivers In Ludhiana City: Punjab – India. The Internet Journal of Health 2007; 8 (1).

DOI Number: 10.5958/0974-9357.2016.00096.9

Effectiveness of an Awareness Programme on Warning Signs During Pregnancy

Geeta Singh[1], Gomathi Mahalingam[2], Laxmi Kumar[3], Mahalingam V[2], Sanchita Pugazhendi[4]

[1]Nursing Tutor, [2]Assistant Professor, [3]Lecturer, [4]Professor,
Himalayan College of Nursing, SRHU, Dehradun, Uttarakhand, India

ABSTRACT

The wellbeing of the society is directly linked to the health and survival of the mother and child. Although the birth of a child is one of the happiest events in all over the world, yet pregnancy and child birth are associated with the health risks to many women during their reproductive years. **Aim:** Study the effectiveness of awareness program on warning signs of pregnancy among antenatal mothers. **Material & Method-** Quantitative quasi-experimental design was trailed to obtain bias free results. One Hundred antenatal mothers who were aged more than 17 years and first and second trimester of pregnancy were conveniently selected to observe the study variables. Self-developed and validated questionnaire was used to collect the information from the antenatal mothers regarding warning signs of pregnancy. **Results:** In pre-test antenatal mothers showed a subnormal (48.2%) knowledge score regarding warning signs of pregnancy. Since, the awareness program was executed among the study participants the mothers knowledge score was raised to conspicuous (71.6%) manner. The inferential statistics demonstrated that the mothers knowledge regarding warning signs of pregnancy was influenced by their age, educational status, occupation, type of family, family monthly income, residence and gravida status at the significant level of $p<0.05$. **Conclusion:** It is evident that awareness program will motivate the antenatal mothers and help them to acquire knowledge about warning signs of pregnancy will promote adequate practice in them to ensure maternal and fetal well-being.

Keywords: *Antenatal mothers, Awareness program, Pregnancy, Warning Signs.*

INTRODUCTION

Pregnancy and child birth is one of life's major events. It is joyous and rewarding as the women passes through transitional phases, into a new life of motherhood. Each pregnancy that a women experience will be new and different.[1]

Most women only experience the normal discomforts that take place during pregnancy. However, sometimes there can be complications that need immediate medical attention. Certain symptoms should be reported to physician or midwives immediately, during any stage of the pregnancy. These includes Excessive vomiting, Pitting edema, Headache, Seizures, High Fever, Vaginal bleeding, Excessive fluid leaking from vagina, Decreased fetal movement, premature labour pain.

The warning signs during pregnancy refers to signs that occur during pregnancy may be hazardous to mother and fetus. This may occurs during the 1st, 2nd or 3rd trimester of pregnancy. The warning signs includes – Vaginal bleeding, persistent severe vomiting, signs of pregnancy induced hypertension (increased weight, swelling of face, arms, legs, head ache, visual disturbance, decreased urine output gastric pain) signs of preterm labor (sudden gush of leak of fluid from vagina continuous uterine contraction) and change in fetal movement during pregnancy[1].

Corresponding author:
Mrs. Gomathi Mahalingam
Assistant Professor, Himalayan College of Nursing, SRHU, Jolly Grant, Doiwala (Post) Dehradun, Uttarakhand, India, 248140, Email: bgomathi@srhu.edu.in bgomathi84@gmail.com

Today nurses and midwives have an important role in health care promotion and prevention. Dissemination of health related information to the clients, family and community is one of the important functions of midwives in caring pregnant women and attaining safe motherhood. Providing information to the pregnant women about warning signs of pregnancy help to ensure a safe and healthy pregnancy. Pregnant women and their families need to be able to recognize the warning signs of pregnancy. The pregnant women need to have plans and resources for obtaining skilled care for the birth and immediate help if problems arise [2].

Based on the above facts the investigator felt that a large population of the antenatal mothers is in need of knowledge about warning signs of pregnancy. Complications can arise suddenly and cause immediate harm if there is no appropriate medical care and treatment. Therefore understanding early warning signs and actions to take when complications occur are crucial steps to reduce maternal and newborn morbidity and mortality. Knowledge of warning signs will improve mothers awareness when they need to seek health services. Knowledge and awareness of warning signs can increase women's confidence and willingness to seek care. It can alert pregnant women to take immediate and appropriate actions for preventing and minimizing the development of complication.

OBJECTIVES

This study attempted to evaluate the effectiveness of awareness programme on warning signs during pregnancy among antenatal mothers.

HYPOTHESES

H_{1}. The Mean Post-test Knowledge score would be significantly higher than mean pre-test knowledge score of antenatal mothers regarding warning signs during pregnancy at the significance level of $p \leq 0.05$.

H_{2}. There would be significant association between pre-test knowledge score of antenatal mothers regarding warning signs during pregnancy with their selected demographic variables at the significant level of $p \leq 0.05$.

METHODOLOGY

A Quasi- experimental with pre – posttest without control group design and Quantitative approach was selected to carry out the study. The study population comprised of antenatal mothers in first and second trimester. The sample size for the study was one hundred antenatal mothers. Convenient sampling technique was used for selecting antenatal mothers who attended and admitted in a tertiary care Hospital. The tools used for study were pre tested socio demographic Performa and knowledge questionnaire regarding warning signs of pregnancy. The awareness program include General awareness, severe vomiting, pitting edema, High fever, excessive vaginal discharge, premature rupture of membrane, fetal movement and premature labour pain and its management. Informed consent was obtained from the study participants and ethical permission was taken from the ethical committee. After the pretest, thirty minutes awareness programme regarding warning signs of pregnancy was conducted by lecture cum discussion with the help of charts and flash cards and after 7th day post-test was conducted with the help of interview schedule.

RESULTS

Table No.1: Socio-demographic characteristics of the study participants N=100

S.N.	Sociodemographic characteristics	Percentage (%)
1.	**Age in years**	
	• 20-25	45
	• 26-31	44
	• 32-37	09
	• 38-43	02
2.	**Educational status**	
	• No formal education	19
	• Primary education	12
	• High school	19
	• Intermediate	23
	• Graduates	21
	• Others	06
3.	**Occupation**	
	• House wife	80
	• Working	20
9.	**Monthly income**	
	• Rs 3000 or less than 3000	27
	• Rs 3001 to 5000	19
	• Rs 5001 to 7000	18
	• Rs 7001 to 9000	12
	• More than Rs 9000	24
4.	**Religion**	
	• Hindu	88
	• Non Hindu	12

Cont...Table No.1: Socio-demographic characteristics of the study participants N=100

5.	**Type of family**	
	• Nuclear	30
	• Joint	70
6.	**Residence**	
	• Urban	49
	• Rural	51
7.	**Gravida**	
	• Primi gravida	44
	• Multi gravida	56
8.	**Gestational age**	
	• First trimester	49
	• Second trimester	51
9.	**Source of information**	
	• Parents	29
	• Friends	09
	• Television	49
	• Health care centre	11
	• Others	02
10.	**Previous exposure**	
	• Yes	20
	• No	80
11.	**Type of exposure (n=20)**	
	• Excessive Vaginal Bleeding	08 (40%)
	• Excessive Vomiting	07 (35%)
	• Pitting Edema	04 (20%)
	• Preterm Labour	01 (5%)

Table No.1 illustrates that majority (89%) of the study participants were aged between 20-31 years, Half (51 %) of the study participants were been second trimester of pregnancy and 42% study participants were been high school and intermediate education. Majority (80%) of them were housewives and living in joint (80%) families. The study participants were more or less equally participated from rural (51%) and urban (49%) areas of Uttarakhand. Almost equal proportion of study participants were primi (44%) and multigravida (56%) mothers also, in period of gestation equally proportionate to first (49%) and second (51%) trimester. Approximately Half (49%) of the study participants had information from Television about warning signs of pregnancy.

Table No.2 Effectiveness of awareness program regarding warning signs during pregnancy N=100

Knowledge Scores	Mean ± SD	Mean difference	't' value	p value
Pre test	17.82±5.38	8.69	32.41	.001
Post-test	26.51 ± 6.59			

***Paired sample't' test, t= 1.98, df =99 and p= 0.05**

Table No:2 shows that the posttest(26.51+ 6.59) knowledge mean score was significantly increased from pretest (17.82+5.38) knowledge mean score at the mean score difference 8.69 . Since the mean score difference was proved statistically ($p<0.05$), the investigator accept the research hypothesis (H_1) and rejecting the null hypothesis (H_{01}).

Knowledge scores

Area wise knowledge regarding warning signs

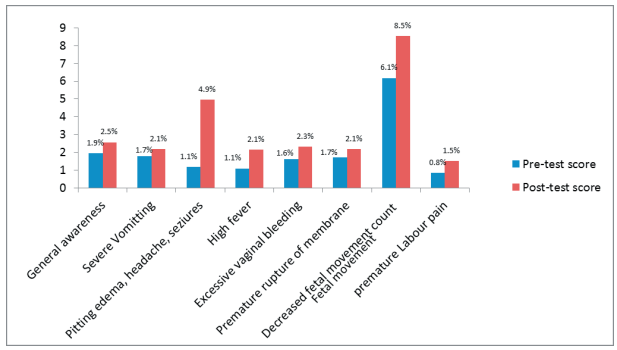


Figure No.1 Comparison of area wise mean percentage of pre and post-test knowledge score

Figure No. 1 illustrate that the highest mean percentage in pre-test score was in the area of fetal movement count (6.18 %) and lowest score was in premature labour pain (0.85%). Whereas in the post-test also similarly observed that highest percentage in area of fetal movement count (8.5 %) and lowest score was in premature labour pain (1.51%).

Table No-3 Association between selected demographic variable with pre-test knowledge score.

N=100

S.N.	Variables	N	Mean Rank	Z score	p value
1.	**Occupation** House wife Working	 80 20	 43.94 76.73	4.53	0.001*
2.	**Religion** Hindu Non Hindu	 88 12	 50.89 47.67	.361	.718
3.	**Type of family** Nuclear Joint	 30 70	 34.93 55.17	3.52	0.001*
4.	**Monthly income** Rs 3000 to 6000 Rs 6000 to 9000	 27 73	 36.93 55.52	2.85	.004*
5.	**Previous exposure to warning signs** No Yes	 80 20	 47.54 62.35	2.04	0.41

*Significant at 0.05 level Mann Whitney U test

Table No.3 depicts since the age of the mothers and pre-test knowledge score was a continuous variable, Pearson's correlation was computed to find correlation between these two variables. The results revealed that there was a mild positive correlation (r=0.231) which was significant at p= 0.05 level. So it can be interpreted that higher the age better the knowledge regarding warning signs among antenatal mothers. The working mothers (76.73) shows significantly better knowledge score than the been house wives (43.94), also the mothers residing in joint family(55.1) knowledge score was significantly higher than the mothers living in Nuclear families (34.93). The mothers those have family income between INR 6000-9000(55.52) shown significantly better knowledge than the mothers family income INR 3000-6000(36.93).

Table No-3.1 Association between residential area, Gravida status and gestational age with pre-test knowledge score **N= 100**

S.N.	Variables	Mean ± SD	Mean diff.	t value	P value
1.	**Residential area** • Urban • Rural	 20.81 ±4.88 14.94 ±4.14	 5.87	6.48	<0.001*
2.	**Gravida status** • Primi gravida • Multi gravida	 15.50 ±4.89 19.64±5.07	 4.14	4.11	<0.001*
3.	**Gestational age** • First trimester • Second trimester	 18.06 ±5.65 17.58 ±5.15	 .47	4.33	 0.66

*Significant at 0.05 level Independent't' test

Table No. 3.1 illustrates that mean pre-test knowledge score was significantly associated with Residential area, Gravida status and period of gestation. Hence it can be interpreted that the antenatal mothers knowledge regarding warning signs of pregnancy will be vary according to their where they are living and Gravida status. Also antenatal mothers from urban area and multigravida mothers were having significantly higher knowledge score than the mother from rural areas and primigravida respectively.

Table No-3.2 Association between educational statuses of antenatal mothers with pre-test knowledge score. N= 100

Educational status of mother	N	Mean ± SD	F	P value
No formal education	19	12.21 ±2.09	29.229	< 0.001*
Primary education	12	13.41 ±3.31		
High school	19	16.47 ±2.83		
intermediate	23	19.52 ±4.53		
Graduation	21	23.76 ±3.60		
Others	9	21.33 ±3.66		

*Significant at 0.05 level Df_b =5 Df_w= 94 F_{cal} =2.29 One way ANOVA

Table No. 3.2 depicts that graduate (23.76 ±3.60) antenatal mothers have significantly (p=0.001) more knowledge than the others regarding warning signs of pregnancy. Hence, it can be interpreted that partially Research Hypotheses (H_2) accepted and Null Hypotheses (H_{02}) rejected.

DISCUSSION

The study results proved that, awareness program regarding warning signs of pregnancy among antenatal mothers played an important role in improving their knowledge and preventing mental stress. These study results were supported by Takoo S, Chhugani M, Sharma V (2013) that Information Education Communication programme was effective in enhancing the knowledge of pregnant mothers on prevention and management of warning signs during pregnancy [4].

Also, these study results were consistent with Kavitha P, Prasath A, Krishnaraj (2012) that Structured teaching programme played an important role in improving the knowledge, knowledge on practice and attitude of primi antenatal mothers about warning signs of pregnancy[1].

Also, these study results were consistent with Perreira KM, Bailey PE, Bocaletti E, Hurtado E, Villagrán S R, Matute J (2002) that safe motherhood programs can effectively increase knowledge of danger signs through clinic- and community-based educational strategies[4].

The study results showed that Age, Occupation of the mothers, type of family, family monthly income, Residential area and Gravida status was significantly influencing the knowledge of the antenatal mothers regarding warning signs of pregnancy.

These results were consistent with Okour A, Alkhateeb M, Amarin Z (2012) that Socio-demographic factors—including duration of education and current employment; husband's duration of education; family size; and whether women were given information about danger signs and symptoms—were associated with awareness in a binary analysis. Multivariate logistic regression analysis revealed that education level of study participants, their husbands' education level, and receiving information about danger signs and symptoms were all associated with awareness (P=0.02) for all associations [5].

Also, these results were supported by Deepa R, Hemavathy V.(2015) There is a highly significant association between literacy level, and over all knowledge regarding danger signs of pregnancy at p<0.001 level. There is a significant association between occupation, family income and over all knowledge regarding danger signs of pregnancy at level of p<0.01 level. There is a significant association between type of family and over all knowledge regarding danger signs of pregnancy at p<0.05 level. Test of the demographic variables like age and religion do not seem to have significant association with the knowledge of primigravida women regarding danger signs of pregnancy [6].

There are several limitations in the study that need to be acknowledged. First, the small sample

size which will affect the generalization of the study findings. Second, sampling technique (convenient sampling technique) where there is more chance of sampling bias. Third, researcher self developed tools were used, where there is question on validity and reliability. The strength of the study was, researcher selected the statistical test based on the distribution of the data.

CONCLUSION

Educating the antenatal mothers regarding warning signs during pregnancy it helps the mothers to identify warning signs of pregnancy in earlier stage of pregnancy. So antenatal mothers can seek health benefits from the health centre and continue their pregnancy more comfortably and securely.

Acknowledgment: No

Conflict of Interest: No

Source of Funding: Self

Ethical Clearance: Ethical committee permission was obtained from the HIHT Ethical committee before starting the study.

REFERENCES

1. Kavitha. P, Prasath A, Krishnaraj. A study to assess the effectiveness of structured teaching program on warning signs during pregnancy in terms of knowledge, practice, and attitude among antenatal mothers. Journal of Science. 2012; 2(1):1-5.)
2. Davis TV, Michael J. Safe motherhood and Newborn Health. Journal of American Women's Association. 2002 March; 57(3): p. 149-53.
3. Takoo S, Chhugani M, Sharma V. Effect of information education and communication (IEC) programme on knowledge of pregnant mothers regarding prevention and management of warning signs during pregnancy. Nurs J India 2013;104(6):284-8.
4. Perreira KM, Bailey PE, Bocaletti E, Hurtado E, Villagrán S R, Matute J. Increasing awareness of danger signs in pregnancy through community- and clinic-based education in Guatemala. Matern Child Health J. 2002; 6(1):19-28.
5. Okour A , Alkhateeb M, Amarin Z. Awareness of danger signs and symptoms of pregnancy complication among women in Jordan, International Journal of Gynecology and Obstetrics, 2012 ;118(1):11–14.
6. Deepa R, Hemavathy V. Effectiveness of Danger Signs of Pregnancy among Primigravida Women. International Journal of Innovative Research in Science, Engineering and Technology. 2015; 4(5): 2821-2824.

DOI Number: 10.5958/0974-9357.2016.00097.0

Self Motivation among B.Sc Nursing Students: A Comparative Study

Pramilaa R

Professor cum Principal, Chirayu College of Nursing, Bhopal

ABSTRACT

Learning is facilitated by the intention to learn, plus the development and implementation of a plan to accomplish the goal. Motivation produces the incentive. The nursing field is working to develop evidence-based practice which involves finding, criticizing, and applying evidence in practice. The present study is aimed at assessing self motivation scores among B.Sc Nursing students and compare between the groups. The sample size was 80, twenty students each from first through fourth year were selected using simple random sampling technique. The results showed mean and mean percentage of B.Sc Nursing I year students were 115.85 and 77.23; II year students were 110.90 and 73.93; III year students were 117.25 and 78.16; and IV year students were 108.15 and 72.10 respectively. The comparison between groups was analyzed by ANOVA. F ratio revealed significance at $P < 0.05$ level and thus it was apparent that each group were different. Analysis on association between self motivation scores and selected demographic variables showed significant association at $P < 0.05$ level.

Keywords: *Self motivation, Learning , Nursing*

INTRODUCTION

Self-regulated learning is controlled by an interconnected framework of factors that determine its development and sustainability and motivation is a critical factor in this framework. For example, during the forethought and planning phase, when students consider why an activity should be completed and how much effort to put toward that activity, their interests and values are factored into the decision. If students do not see value in learning tasks, then they are less likely to spend much time setting goals and planning strategies to accomplish those tasks. Additionally, students' efficacy believes their confidence in their ability to successfully complete tasks also play a role in learning. In general, self-regulation and motivation work hand in hand to explain student learning. [(1)]

The work that is done with full passion and dedication has great worth. Motivation is the inspiration of a person to do any task. It can be the draining force that drives an individual's behavior. When students are motivated to learn, they are more likely to invest the necessary time and energy needed to learn and apply appropriate self-regulated learning skills, and when students are able to successfully employ self-regulation strategies, they are often more motivated to complete learning tasks. Self motivation occurs when a learner independently uses one or more strategies to keep themselves on-track toward a learning goal. It is important to the process of self-regulation because it requires learners to assume control over their learning. By establishing their own learning goals and finding motivation from within to make progress toward those goals, students are more likely to persist through difficult learning tasks and often find the learning process more gratifying. [(2)]

One aim of nursing education is to motivate nurses to acquire skills for offering appropriate quality of health care services to patients with multiple complex problems. And the nursing institutions are facing this huge challenge for decades together. There is no doubt that nursing students require long term motivation to help others in the future. Therefore, paying due attention to the concept of motivation is of great importance in clinical education as well. [(3)]

The nursing students' motivation towards their studies is a question of energy, such as processes starting, sustaining and directing their study behavior.

Motivation can be seen either as an intrinsic or an extrinsic factor. In a study of self efficacy, intrinsic and extrinsic motivations as predictors for students' engage or not in academic work were found that self efficacy and intrinsic motivation were correlated to academic identification and were predictors to meaningful cognitive engagement. Furthermore, extrinsic motivation was found to be predictor to shallow cognitive engagement in learning tasks. [4]

In the light of aforementioned studies, the investigator has taken up the present study to assess the self motivation among nursing students as it is an integral component to facilitate their learning process.

Problem statement: A comparative study to assess self motivation among B.Sc Nursing students in a selected nursing college, Nainital.

Objectives of the study:

1. Assess the self motivation scores of first, second, third and fourth year B.Sc Nursing students.

2. Compare the mean scores of self motivation among first, second, third and fourth year B.Sc Nursing students

3. Explore the difference by comparing self motivation scores between four groups of B.Sc Nursing students

4. Associate between the self motivation scores obtained with selected demographic variables among B.Sc Nursing students.

MATERIALS AND METHOD

The research design adopted for the present study was descriptive, comparative study of non-experimental type. The setting utilized for the study was Lecture halls of Naincy College of Nursing, Nainital. The population for the study being B.Sc Nursing students and the sampling technique adopted was simple random sampling using lottery method. A total of 80 students were the sample size. The tools used for data collection comprised of two sections. Section A encompassed demographic variables and Section B was a rating scale of Self motivation, it contains 30 items. The rating scale ranged from one to five. The score 1 = completely false, 2= mostly false, 3 = neither true nor false, 4 = mostly true and 5 = completely true.

The data collection proceeded by obtaining the permission from the authorities and the respondents. The respondents were selected by simple random sampling technique using lottery method. Twenty students were drawn from each class from first year through fourth year B.Sc Nursing students. The tool was distributed to them and average time taken for them to complete was 30 minutes. The study was conducted in January 2015. Subsequent with coding the data, it was analyzed in accordance to the objectives of the study.

Analysis and interpretation: Table 1 depicts characteristics of demographic variables included in the present study. The age group shows 17.5% belongs to 18 – 19 age group, 27.5 % to 19- 20, 21.25 % to 20- 21, 20% to 21- 22, and 13.75 % to 22- 23. With regard to the number of elder siblings, 40% had no siblings, 26.25% had one elder sibling, 18.75% had 2, 6.25 had 3 and 8.75 had 4 and above. Related to percentage obtained in higher secondary 7.5% obtained distinction, 26.25% obtained first class, 50% secured second class and 16.25 % had pass class. Pertaining to father's qualification, 11.25% were postgraduates, 37.5% were undergraduates, 51.25% did higher secondary and mother's qualification, 7.5% were postgraduates, 12.5% were undergraduates, 75% did higher secondary and 5% were illiterate. 97.5% of respondents reported that they had ambition in life; 92.5% responded that they need compliments to complete a task; and 95% reported that they were independent to complete any task assigned to them.

Table: 1: Percentage distribution of demographic variables N=80

Variables	Category	Frequency	Percentage
Age group	18 – 19	14	17.50
	19 – 20	22	27.50
	20 – 21	17	21.25
	21 – 22	16	20.00
	22 - 23	11	13.75
Placement	I year	20	25.00
	II Year	20	25.00
	III Year	20	25.00
	IV year	20	25.00

Cont... Table: 1: Percentage distribution of demographic variables N=80

Number of siblings	0 1 2 3 4 and above	32 21 15 5 7	40.00 26.25 18.75 06.25 08.75
Percentage obtained in higher secondary	Distinction First class Second class Pass class	6 21 40 13	07.50 26.25 50.00 16.25
Father's Qualification	Post Graduation Under Graduation Higher Secondary Illiterate	09 30 41 0	11.25 37.50 51.25 0
Mother's Qualification	Post Graduation Under Graduation Higher Secondary Illiterate	06 10 60 04	07.50 12.50 75.00 05.00
Ambition in life	Yes No	78 02	97.50 02.50
Needs compliments	Yes No	74 06	92.50 07.50
Dependency	Yes No	04 76	05.00 95.00

Table: 2: Mean and Mean percentage of Self motivation scores among B.Sc Nursing students N=80

Placement of B.Sc Nursing students	Mean Scores	Mean percentage
I Year	115.85	77.23
II Year	110.90	73.93
III Year	117.25	78.16
IV Year	108.15	72.10

Table 2 represents mean and mean percentage of self motivation scores of students. The mean and mean percentage of B.Sc Nursing I year students were 115.85 and 77.23; II year students were 110.90 and 73.93; III year students were 117.25 and 78.16; and IV year students were 108.15 and 72.10 respectively.

Table: 3: ANOVA table to determine significance of self motivation scores between groups

Source of Variation	SS	df	MS	F ratio	5% LOS
Between sample	1081.8	4 - 1 = 3	360.6	3.01*	F (3,76) 2.725
Within sample	9098.5	80 – 4 = 76	119.71		
Total	10180.31	80 – 1 = 79			

* P<0.05 level of significance

Table 3 shows an ANOVA table to determine significance of self motivation scores between four groups of students. The results reveal that F ratio is significant at P<0.05 level. It indicates each group was significantly different.

Table: 4: Association between selected demographic variables and self motivation scores of students N= 80

Variable	Chi Square Value
Number of siblings	30.24*
Marks secured in higher secondary	32.30 *
Qualification of father	19.64 *
Qualification of mother	107.6 *
Ambition	72.2 *
Needs compliment	57.8 *
Dependency	64.8 *

*Significant at P<0.05 level

Table 4 displays the association between the self motivation scores of students with selected demographic variables. It was found that all the variables have significant association at P <0.05 level.

DISCUSSION

Characteristics of demographic variables: The majority findings of the demographic variables are described. Among the respondents majority 27.5% belonged to age group of 19 – 20 years; 40% of respondents did not have elder siblings; 50% of respondents secured second class in the higher secondary examination; 51.25% of respondents'

father's qualification and 75% of mother's qualification was higher secondary. 97.5% of respondents had ambition in life, 92.5% of respondents require compliments to complete the task; and 95% of them reported they were independent to complete the task.

Comparison of mean scores of self motivation: The mean and mean percentage of B.Sc Nursing I year students were 115.85 and 77.23; II year students were 110.90 and 73.93; III year students were 117.25 and 78.16; and IV year students were 108.15 and 72.10 respectively. Among the four groups it was found that self motivation scores of B.Sc Nursing III year students was high comparatively. However, the differences between each group were not highly remarkable. The present study finding is consistent with the study conducted to explore the variation in nursing students' motivation to complete their program and the results of the study revealed students' degree of motivation increased significantly with age and nearly half the students self reported desire to become a nurse and this is a factor that has previously been found to motivate nursing students.[5]

Comparison on difference of self motivation scores between four groups: An attempt to explore the difference of self motivation scores between each group was done using ANOVA. It was found that F ratio was 3.01 significant at $P < 0.05$ level of significance. Thus, it was proved that self motivation scores of each group were significantly different. This finding is similar to the comparative study conducted to assess motivation level among post graduate students and the results showed that students were highly motivated in each group and these factors are extrinsic motivation factors which motivate student towards their profession.[6]

Association between the selected demographic variables and self motivation scores: It was found that the variables such as number of elder siblings, marks secured in higher secondary, qualification of father and mother, ambition, needs compliment and dependency were highly significant with self motivation scores at $P < 0.05$ level of significance.

CONCLUSION

The present study highlights that the students do possess self motivation which is one of the important ingredients for professional growth and academic achievement. Self motivation occurs in the absence of external rewards or incentives and can therefore be strong indicator that a learner is becoming more autonomous. Hence, the role of nursing faculty should be stretched adequately to explore the ability of self- motivation among nursing students at the time of entry. And the activities planned accordingly to retain or enhance self motivation among students can bring drastic changes that can create a great impact in nursing education and practice.

Implications of the study

- The teaching faculty should take into consideration to assess motivation among students instead of being prejudiced that student population is always at the receiving end of demanding motivation from external sources to complete any tasks.
- Incorporating more of independent learning activities in the curriculum may enhance those self motivation skills of students
- Students with high level of self motivation can accomplish their learning tasks and equip them with more refined skills

Recommendations of the study:

- A correlation study between independent learning performance and self motivation among nursing students can be studied
- A study on factors enhancing and limiting self motivation among student nurses can be undertaken
- Similar study could be done at the state level to draw into better generalization

Ethical Clearance: Obtained from the Research Advisory committee of the institute

Conflict of Interest: None

Source of Fund: None

Acknowledgement: I owe my thanks to the participants.

REFERENCES

1. Zimmerman, B. Investigating self-regulation

and motivation: Historical background, methodological developments, and future prospects. American Educational Research Journal. 2008; 45(1) : 166-183.

2. Wolters, C.A. Regulation of motivation: Contextual and social aspects. Teachers College Record. 2011; 113(2) : 265-283.
3. Dale B, Le land A, Dale JG. What factors facilitate good learning experiences in clinical studies in nursing: bachelor students' perceptions. RN Nurs. Dec 17;2013:628679
4. Rongstad M-K. Recruitment to and Motivation for Nursing Education and the Nursing Profession. J Nurs Educ. 2002; 41(7):321–25.
5. http://www.ncbi.nlm.nih.gov/pmc/ articles
6. Jamali MB et al., A comparison of motivation level of postgraduate students at University of Sindh Jamsharor. Australian Journal of Business and management research. 2011; 1(6): 167-173.

DOI Number: 10.5958/0974-9357.2016.00098.2

Effectiveness of STP on Prevention of Cervical Cancer among Married Women in Selected Rural Areas of Kasaragod Dist, Kerala

Josephine Jacquline Mary N I[1], Alby Xavier[2], Athira M[2], Chinju Joseph[2], Jasiya H A[2], Neethu C[2], Smitha Susan Isac[2], N Udaya Kiran[3]

[1]Professor-Dept of Medical-Surgical Nursing, SI-MET College of Nursing, Ayampara, Periya. P.O. Kasaragod Dist, Kerala, [2]4th yr B.SC.Nsg Students, SI-MET College of Nursing, Kasaragod, [3]HOD-Community Medicine, KSHEMA NITTE University-Mangalore

ABSTRACT

Background: Cervical cancer is a huge health problem in developing countries, and the fifth most common cause of cancer death in the world and the second largest cause of cancer mortality in India. Currently India accounts for ¼th of the global cervical cancer burden. Cervical cancer is a sexually transmitted disease. Persistent infection with oncogenic human papilloma virus, most frequently contracted through vaginal intercourse is necessary for the development of cervical cancer and high grade precursor lesions are like many other cancer. HPV is the leading cause of cervical cancer with the presence of HPV strains 16 and 18 cervical intraepithelial neoplasia.This study aimed to assess the effectiveness of structured teaching programme on knowledge, attitude, practice and perceived barriers of screening among married women on prevention of cervical cancer in selected areas of kasaragod district. **Objectives:** To assess the knowledge,attitude,practice and perceived barriers of married women on prevention of cervical cancer, to find the association between knowledge and selected demographic variables also to find the significance between the pre and post test scores. **Method:** Quantitative approach was used and Quasi experimental one group pre test and post test design was selected for the study. Convenient sampling technique was adopted for the study for sample selection.The sample size was 50 which includes married women and self administered structured knowledge questionnaire was used for the data collection on prevention of cervical cancer. **Results:** The results of the study shows that 60% of the samples have poor knowledge, majority (50%) had very good attitude regarding cervical cancer screening, 42% of samples were identified with the perceived barriers of screening as they did not have any symptoms. The study found that there is a significant association between post test knowledge scores with age, education, occupation, marital status and source of information. Also the study shows that there is a significant difference in the mean pre and post test knowledge scores. **Conclusion:** The study results indicates that the Nursing professional have an important role in improving the well being and quality of life of women by initiation of awareness programmes to improve the knowledge and screening practices and thereby prevent cervical cancer by early detection.

Keywords: *Structured Teaching Programme; Cervical Cancer.*

Corresponding author:
Prof.Josephine Jacquline Mary.N.I.
Dept of Medical-Surgical Nursing,SI-MET College of Nursing, Ayampara, Periya.P.O. Kasaragod Dist.Pin-671 316. Email: josephinejacquline@gmail.com

INTRODUCTION

Cervical cancer is the fifth most common cause of cancer death in the world and the second largest cause of cancer mortality in India. Currently India accounts for ¼ th of the global cervical cancer burden.. India

has a population of 336.58 million women aged 15 years and older who are at risk of developing cervical cancer. Cervical cancer is a sexually transmitted disease, Persistent infection with oncogenic human papilloma virus, most frequently contracted through vaginal intercourse is necessary for the development of cervical cancer and high grade precursor lesions are like many other cancer. Cervical cancer can be cured when it is diagnosed in early stages.[1]HPV is the leading cause of cervical cancer with a notable relationship between the presence of HPV strains 16 and 18 cervical intraepithelial neoplasia. Other risk factors include multiple sexual partners, early age of first intercourse, history of sexually transmitted infections, smoking tobacco, immunosuppression, low socio-economic status and poor access or use of health care.[2]Approximately 90% of cervical cancers are squamous cell carcinoma, beginning at squamo-columnar junction near the external end of the cervix. The most important reason for the sharply higher cervical cancer incidence in developing countries in comparison to developed countries is the lack of effective utilization of preventive health services that are available.[2]

BACKGROUND

A study conducted on cervical cancer screening practices among rural Indian women in Manipal college of nursing. The major findings of this study were none of the women under the study never had a cervical cancer screening and out of 407 married women. 94% of them had no previous knowledge about cervical screening test. These findings are similar to those of other studies done in developing countries[3].Another study done among 192 women's in Pakistan also reported that most common reason citied for not having received a pap test was the lack of information and the Pakistan study demonstrated a very low coverage of the pap test and a poor knowledge recording[1].

Need and significance of the study

Cervical cancer is a disease which is largely asymptomatic in it's early stage. So regular screening need to identify in it's early pre-cancerous stage.[4] Cervical cancer screening is needed to identify by using the papanicolaou test. It prevents the development of the cervical cancer by recognizing a pre-cancerous state in the cervix and allows 90% to be identified, treated and cured before it can spread. Pap smear have been shown to detect early cervical cellular abnormalities, thereby reducing morbidity and mortality. One of the major problem that needed to be addressed is the inadequacy of the lab to accomodate high number of smears for screening and this could be a limitation for the conduction of pap smear screening.[4]

The current studies estimates indicate that every year 1,34,420 Indian women are diagnosed with cervical cancer with the figure for new cervical cases projected to reach 2,03,757 by 2025.It is also estimated that at present approximately 72,825 women die due to cancer of cervix by 2025. This number is projected to raise 1,15,171[5].So the aim of this study is to assess the knowledge, attitude, practice and perceived barriers of cervical cancer screening among married women in selected areas of Kasaragod district.

Statement of the problem

A study to assess the effectiveness of structured teaching program on knowledge, attitude, practice and perceived barriers of screening among married women on prevention of cervical cancer in selected areas of kasargod district**.**

Objectives

- To assess the level of knowledge on prevention on cervical cancer among married women.
- To determine the attitude on prevention of cervical cancer among married women.
- To determine the practices of married women on prevention of cervical cancer.
- To determine the perceived barriers of screening on cervical cancer among married women.
- To find out the association of knowledge with selected demographic variables.

REVIEW OF LITERATURE

A cross sectional study was conducted to assess the knowledge and awareness about cervical cancer and it's prevention amongst health professionals in the tertiary care hospital in Karachi using interview based survey. The study reported that only 23.3% of the respondents were aware that cervical cancer is the

most common cause of gynaecological cancers and 26% knew it to be the second highest in mortality. 78% were aware that infections is the most common cause of cervical cancer and of these 62% said that virus is the cause and 61% of the respondents knew that the virus responsible is human papilloma virus.[10]An exploratory research design was adopted to assess the knowledge and practice regarding cervical cancer among 100 married women between the ages 20-60 years at indoor (M.P) using purposive sampling. The investigator used a structured questionnaire to assess the knowledge regarding early diagnosis and prevention of cervical cancer. The conclusions were made by saying that there is a need to create public awareness regarding the cervical cancer screening and practice.[11]

A study was conducted on cervical cancer among post menopausal women at Chennai revealed that 68% of post menopausal women had inadequate knowledge ,32% had moderate knowledge and none had adequate knowledge.[13]A descriptive study conducted to explore the role of awareness and knowledge of cervical cancer as a barrier to screening participation among urban women in Tamil Nadu; and further to identify the potential impact of increased cervical cancer awareness and knowledge on screening attitude. Quantitative and qualitative methods were used to characterize existing levels of awareness and knowledge of cervical cancer and screening among 207 women from the metropolitan area of Chennai. The results suggest that the majority of women (69.6%) were not aware of cervical cancer and very few (16.4%) were aware of screening. Demographically, women with secondary levels of education or higher were significantly more likely to have heard of cervical cancer and screening. Of the women that were aware of cervical cancer screening, most reported receiving information through television (33%) or a healthcare provider (28.6%). This study further explored changes in associations between awareness, knowledge, perceived susceptibility, and screening attitude. It was observed that an overwhelming majority of women were receptive to participating in free cervical cancer screening, independent of previous knowledge of 2 cervical cancer. [14]

A study done among women in a rural population of Kerala, India to identify current knowledge and practice regarding screening showed that the reason for not getting the screening test done in spite a desire to do so where mainly no awareness, no disease or symptoms, not knowing where to go and never thought of concept of preventive behavior were found important factors.[18]

METERIALS AND METHOD

Research approach used for the study is quantitative approach.The design adopted for this study is quasi experimental design**.**In the present study the variables are the knowledge, attitude.practice and perceived barriers of married women and demographic variables include age, religion, education, occupation, marital status, number of children, annual income, source of information. Setting of the study is selected areas of Kasaragod district which include PHC Udma and CHC Periya.The population of the present study was married women with the age group of 30-60 years. The sample comprises of 50 married women in the age group of 30-60 years in selected areas of Kasaragod district who were selected through non probability convenience sampling technique.The Data collection tool for the present study comprises of Socio demographic data, knowledge regarding prevention of cervical cancer, Attitude towards prevention of cervical cancer, Practice of married women , Perceived barriers of screening. Participants who fulfill the criteria were included in the study. Content validity was obtained from subject experts regarding the relevance and appropriateness of the tool for the indented purpose.The data was collected using structured questionnaire to assess knowledge regarding prevention of cervical cancer among married women after getting permission from participants.

MAJOR FINDINGS

The data collected were analysed and organized under the following headings

Study findings reveals that 40% of the samples are between the ages of 51-60, 40% of the samples having primary education, 76% are house wives and most of the sample (34%) received knowledge from family and neighbors.

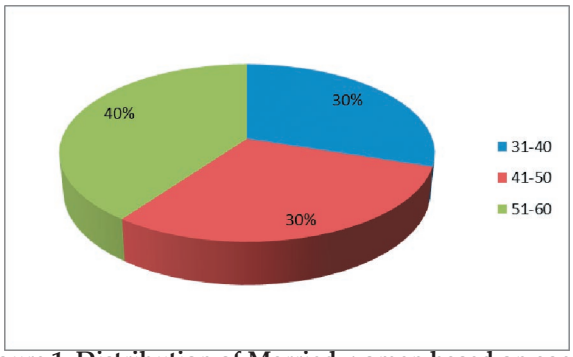


Figure 1: Distribution of Married women based on age

Figure 1 shows that 40% of married women belongs to age group of 51-60yrs.

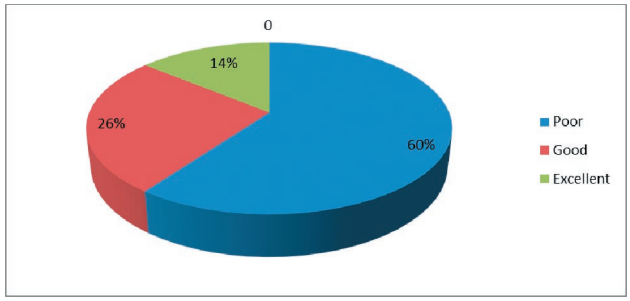


Figure 2 : Distribution Knowledge of married women on prevention of cervical cancer

Figure 2 shows that 60% of married women have poor knowledge. 26% had good knowledge and 14% of them had excellent knowledge regarding cervical cancer.

Table 1: Distribution of married women based on attitude regarding cervical cancer (n=50)

Attitude	(N)	(%)
Poor (0-5)	0	0
Average (6-10)	0	0
Good (11-15)	13	26
Very Good (16-20)	28	56
Excellent (21-25)	9	18

Table 1 reveals that 56% samples had very good attitude.

Table 2:Distribution of married women based on screening practices (n=50)

Practices	Yes		No	
	(N)	(%)	(N)	(%)
Personal hygiene	47	94	3	6
Frequency of sanitary napkin	47	94	3	6
Genital wash after contact	46	92	4	8
HPV Vaccine	0	0	5	100
Use of contraception	15	30	45	70

Table 2: Represents that 100% of the samples have not taken HPV Vaccine.

Table 3: Distribution of married women based on perceived barriers of screening. (n=50)

Sl no	Perceived barriers	(N)	(%)
a	Fear of pain	15	30
b	Tension	7	14
c	Cost	15	30
d	Not explained by health professionals	10	20
e	Lack of time	8	16
f	No prescription by doctor	14	28
g	No chance of getting disease	12	24
h	Not useful	6	12
i	No symptoms	21	42
j	Lack of awareness	18	36

Table 3 represent 42% people have not undergone screening because of not having any symptoms.

Table 4: Association between knowledge of married women and selected socio-demographic variables. (n=50)

Selected variables	x^2	df	P
Age	9.76	4	9.49
Education	17.46	6	12.59
Occupation	26.17	6	12.59
Marrital status	18	4	9.49
Source of information	16.18	6	12.598

*Significant at the level of 0.05 Table 4: Indicates that chi-square value for age is 9.76 which is more than P value 9.49.Hence it indicates that there is an association between knowledge and age. The chi-square value for education is 17.46 which is more than P value 12.59which indicates there is an association between knowledge and education. The chi-square value for occupation is 26.17 which is more than P value 12.59, hence there is an association between knowledge and occupation. The calculated chi-square value for marital status is 18 which is more than P Value of 9.49 which represents there is an association between knowledge and source of information.

Table: 5 Mean and standard deviation of pre and post test knowledge scores on prevention of cervical cancer (n=50)

	Mean	SD	No	Df	' t' Test
Pre test	17.82	7.84	50	49	6.58
Post test	10.44	1.42	50	49	

*Significant at the level of 0.05.The t test value is 6.58 which is <t value 2. Hence there is a significant difference in the pre and post test knowledge scores on Prevention of cervical cancer.

CONCLUSION

Through this analysis researcher tried to find the knowledge, attitude, practice, perceived barriers of screening among married women regarding the prevention of cervical cancer by selecting 50 samples of married women based on non probability convenience sampling method. 11 questions are used to analyse knowledge, 5 questions for attitude, 5 questions for practice and 10 options as perceived barriers of screening. The results show that 60% of the subject had poor knowledge. Majority of the sample had very good attitude towards screening. The finding regarding practice reveals that 100% of the samples have not taken HPV vaccine. The perceived barriers for screening for 42% samples were having no symptoms. According to chi-square analysis results reveals that there is a significant association between knowledge and selected demographic variables like age in years, education, occupation, marital status and source of information. There is significance of pretest and posttest knowledge scores. The findings of the study show that married women lack adequate knowledge regarding cervical cancer and its prevention. Nurses must involve oneself in encouraging the knowledge and screening practices. Proper screening practices by undergoing Pap smear will help to identify cervical cancer.

Nursing Implication to practice: Nursing personnel have an important role in improving the well being and quality of life of women by initiation of awareness programmes to improve the knowledge and screening practices and thereby prevent cervical cancer by early detection. Mass education can be given by the nurses at community level to create awareness in these aspects especially underdeveloped rural areas. The involvement of community in these programmes that reach beyond the walls of the health care facility with well-designed and well implemented shows e potential in various health indicators. Nurses can conduct more research using large number of samples in different settings by doing various screening procedures for early detection and diagnosis followed by appropriate treatment with a better quality of life.

Acknowledgment: our sincere thanks to all the participants of the study and the Medical officers of selected community centres of kasaragod dist,Kerala.

Conflict of Interest: None

Source of funding: Self

Ethical Clearance: Institutional ethical committee and informed written consent from all the participants

REFERENCES

1. Joyce M Black, Medical Surgical Nursing. 7th ed: 2010, Elsevier publications.
2. SB Thovarayi, JA Noronha, S Nayak(2009) Cervical cancer screening practices among rural Indian women.
3. Indian Journal of continuing Nursing Education 2012(6).
4. International Journal for Nursing care 2014 July, November (2).
5. Pitts M, Clarket T Women's knowledge of cervical cancer health education research 2002 December 17(6).
6. Mutyaba T., N Miro F.A. weiderpass, E. (206). Knowledge, attitude and practices on cervical cancer screening among the medical workers of mulago hospital, Uganda, Biomed central medical education 1(6), 13 Retrieved from http: // www. biomed central.com/1472-6290/6/13.
7. Asquith C,MC, Cattery K Social and psychological impact of HPV, in cervical screening among University of Sidney 2005 October 133-142.
8. Jubilie S.J., Blantol, M.F, P.D, Zhanq, J., Foster, D., Monk, J., Hanshew, D.(1996).Assessment of knowledge, attitudes and behaviours relatves to cervical cancer and the pap smear among adolescent girls. journal of cancer education (11)4,230-232.
9. Ali, S. F, Ayub, S., Manzoor, N. F., Azim, S., Azif, M., Akhtar, N., Uddin, N(2010). Knowledge and assessment about cervical cancer and its prevention amongst interns and nursing staffs in tertiary care.
10. Hariharan V. knowledge and practice regarding cervical cancer among married women Indian journal of Nursing research June 2011, volume 3.
11. Karthikeyan. Indian journal of continuing Nursing education volume 13 July-December 2012.
12.. Mohanraj, J. Vanjeenanthammal, G (2008) structured teaching programme improves early detection and prevention of cervical cancer, Nightingale Nursing times 30(1), 24-32.
13. Robin Marie(2008) Screening or cervical cancer an exploratory study of urban women in Tamil Nadu India.
16. Rezaei, Baradaran M,(2007) Effects of two educational methods of knowledge, attitude and practice of women high school teachers in prevention of cervical cancer .
17. Caplash N, Stobti RL(2006), epidemiology of cervical cancer a case control study on North India .
18. Smeltzer C Suzanne, Bare Brenda. Brunner & Suddharth's Medical Surgical Nursing. 10thed.Philadelphia: Lippincot Williams & Wilkins; 2004.
20. K.Park preventive and social medicine 19thed. Banarsidas Bhanot publications.

DOI Number: 10.5958/0974-9357.2016.00091.X

Effectiveness of Abdominal Effleurage versus Pharmacological Intervention on Labour Pain among Primi Parturients Admitted in Labour Room

Ammu Cherian[1], Lissa Peter[2]

[1]M.Sc (N) Student, [2]Vice Principal , HOD in Department of Obstetrics & Gynecological Nursing, Lisie College of Nursing, Lisie Hospital, Ernakulam North, Kochi

ABSTRACT

The labour and birth process is an exciting, painful and anxiety provoking. The alleviation of pain is important. The present study was undertaken to evaluate the effectiveness of abdominal effleurage versus pharmacological intervention on labour pain among primi parturients. Objectives of the study were, assess the labour pain among primi parturients before and after abdominal effleurage, assess the labour pain among primi parturients before and after pharmacological intervention and compare the labour pain among primi parturients after abdominal effleurage and pharmacological intervention. The present study was based on Modified J. W. Kenny's Open System Model proposed by J.W. Kenny's. The research design used was quasi experiment design with pretest multiple posttest comparison group design. The study was conducted among 30 primi parturients on labour pain selected by purposive sampling technique in labour room of Lisie hospital, Ernakulam. The Numerical pain scale was used for assessing the labour pain among primi parturients. Content validity of the tool was done with the help of experts. Pilot study was conducted among 10 subjects and the study was found to be feasible. The main study data were collected from Lisie hospital, Ernakulam. Pretest was conducted for both groups when uterine contraction of duration more than 20 seconds. The abdominal effleurage was performed for subjects in experimental group from the onset of each uterine contractions of duration more than 20 seconds till relaxation and further abdominal effleurage was repeated for every subsequent contraction up to the contraction of duration more than 40 seconds and for subjects in comparison group pharmacological intervention (Inj: Fortwin 30mg IM and Inj: Phenergan 25mg IM) were administered from the onset of uterine contraction of duration more than 20 seconds and repeated after 4 hours if women demanded. After the intervention posttest 1 was conducted for both group 1 hour after the pretest and posttest 2 was conducted 1 hour after the posttest 1 coinciding with uterine contraction. The data collected were analysed using descriptive and inferential statistics. Study findings revealed that the mean score of reduction of labour pain was lower in comparison group and higher in experimental group for posttest 1 and posttest 2 and t-value for posttest 1 and posttest 2 were 5.547* and 7.273* respectively, significant at 0.05 level. The result of the study showed that the abdominal effleurage was effective in reducing labour pain compared to pharmacological intervention.

Keywords: *Effectiveness; Abdominal Effleurage; Pharmacological Intervention; Labour Pain*

INTRODUCTION

Labour, the culmination of pregnancy, is an event with great psychological, social and emotional meaning for the mother and her family[1]. Labour is the process of moving the fetus, placenta, and membranes out of the uterus and through the birth canal[2]. Labour pain is the result of a complex and subjective interaction of multiple physiologic and psychosocial factors on a women's individual interpretation of labour stimuli. An understanding of labour pain as a multidimensional framework provides the basis for a women centered approach to labour pain management[3].

Childbirth, for healthy young primi women,

may be her first experience with significant pain and as a result, she may not have effective pain coping strategies. Pain perception for nulliparous women is often greater than that of multiparous women during early labour. The gate control theory of pain helps the women to relieve the pain during childbirth, using distraction technique such as massage or stroking, music, etc. reduce or completely blocks the capacity of nerve pathways to transmit pain[2].

A variety of non-pharmacologic and pharmacologic methods can help the woman to cope with the discomfort of labour. Non pharmacologic measures are often simple, safe and relatively inexpensive. Pharmacologic measures for pain management should be implemented before pain becomes so severe that catecholamine increases and labour is prolonged[2].

Effleurage (light massage) is light stroking, usually of the abdomen and it is a simple and effective method. Parturient mothers may experience significant pain during labour but the severity of labour pain may be minimized by massage therapy and can experience great satisfaction afterwards[2]. Therefore the investigator desired to find out the effectiveness of abdominal effleurage during labour.

Objectives

1. Assess the labour pain among primi parturients before and after abdominal effleurage.

2. Assess the labour pain among primi parturients before and after pharmacological intervention.

3. Compare the labour pain among primi parturients after abdominal effleurage and pharmacological intervention.

Hypothesis

H1: The mean score of pain reduction after abdominal effleurage during labour is significantly higher than the mean score of pain reduction after pharmacological intervention among primi parturients. It will be tested at 0.05 level.

MATERIALS & METHOD

A Quasi experiment design with pretest multiple posttest comparison group design was adopted for the study. The sample in this study included 30 primi parturients who were admitted in labour room with 15 subjects in each group from Lisie hospital meeting the sampling criteria. Sampling technique was non-probability purposive sampling with random assignment to experimental or comparison group.

Tool / instrument

In this study the tools used was tool to assess labour pain. It consists of 2 sections:

Section A: Demographic data

Demographic data were collected from the clinical profile and interview by the investigator which included age in years, education, occupation, gestational age at present (in weeks), nature of onset of labour and method of induction (medical, surgical or combined).

Section B: Numerical pain scale

Numerical pain scale, which is a modified pain scale selected for the assessment of the labour pain. The scale was grouped into five categories.

|____|___|___|___|___|____|___|____|___|___|

0 1 2 3 4 5 6 7 8 9 10

Where 0 – no pain, 1 – 3 – mild pain, 4 – 6 – moderate pain, 7 – 10 – severe pain

Technique – self reporting

Intervention

Abdominal effleurage:

It was performed from the onset of each uterine contraction of duration more than 20 seconds till relaxation and further effleurage is repeated for every subsequent contraction up to the contraction of duration more than 40 second.

Pharmacological intervention:

It was the administration of Injection Fortwin (30mg) IM and Injection Phenergan (25mg) IM from the onset of uterine contraction of duration more than 20 seconds and repeated after four hours if woman demanded.

The data were collected after obtaining

Institutional Ethical Clearance and formal administrative permission. Informed consent from the subjects were obtained and confidentiality was assured. Pretest was conducted for both groups using numerical pain scale when uterine contraction of duration more than 20 seconds. The abdominal effleurage was performed for subjects in experimental group from the onset of each uterine contractions of duration more than 20 seconds till relaxation and further abdominal effleurage was repeated for every subsequent contraction up to the contraction of duration more than 40 seconds and for subjects in comparison group pharmacological intervention were administered from the onset of uterine contraction of duration more than 20 seconds and repeated after 4 hours if women demanded. After the intervention posttest 1 was conducted for both group 1 hour after the pretest and posttest 2 was conducted 1 hour after the posttest 1 coinciding with uterine contraction. All the procedure were done by the investigator. The data collected were analysed using descriptive and inferential statistics.

RESULTS

Description of samples

In comparison group 53.33% of participants were in the age group of 26 28years whereas in experimental group 53.33% of the participants were in the age group of 23 25years.Based on educational qualification most of the participants in the comparison (53.33%) and experimental (60%) groups were graduates. Most of participants (53.33%) in comparison group were private employees whereas majority (73.33%) of participants in experimental group were housewives. Most of participants in comparison group (60%) and in experimental group (53.33%) had the gestational age of 39weeks. All participants in comparison and experimental groups, the labour was induced and method of labour induction was combined. 40% participants in comparison group labour were induced medically with prostaglandin E_1 and prostaglandin E_2 whereas 60% participants in experimental group labour were induced medically with prostaglandin E_2. All (100%) of participants in comparison and experimental group labour were induced surgically with ARM.

Effect of abdominal effleurage on labour pain

During pre-test 14 participants had moderate pain and one participants had mild pain before intervention, but after performing abdominal effleurage in first post-test all 15 participants reported moderate pain and during second post-test, 13 participants reported moderate pain and only two participants had severe pain. However the labour pain was increased due to progressive phenomena of labour pain.

Effect of pharmacological intervention on labour pain

During pre-test, 14 participants had reported moderate pain and 1 participant had mild pain before administering injection, but after administration of pharmacological intervention in first post test, 10 participants reported severe pain and 5 participants reported moderate pain and during second post-test all (15) of them had reported severe pain.

Effectiveness of abdominal effleurage over pharmacological intervention on labour pain

The mean score of labour pain among primi parturients during pretest and posttest for experimental group and comparison group are presented in figure1.

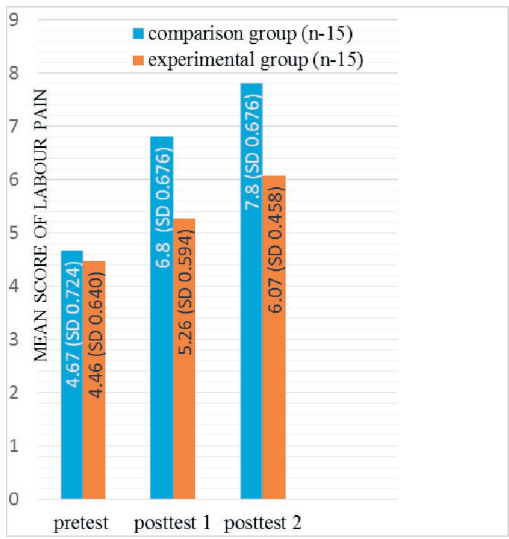


Fig 1 Mean score of labour pain in comparison group and experimental group

The Fig 1 shows that the mean prettest score of labour pain in comparison group was 4.67 and mean posttest 1 and mean posttest 2 scores of labour pain

were 6.80 and 7.80 respectively. In experimental group mean pre-test score of labour pain were 4.47 and mean posttest 1 and mean posttest 2 scores of labour pain were 5.27 and 6.07 respectively. The mean pretest score is almost similar in both comparison and experimental group. The mean posttest 1 and mean posttest 2 score of labour pain intensity were not increased in experimental group (5.57 and 6.07) and were increased in comparison group (6.80 and 7.80)

To test the effectiveness of abdominal effleurage over pharmacological intervention on labour pain the following null hypothesis was formulated.

H1(0) - The mean score of pain reduction after abdominal effleurage during labour is not significantly higher than the mean score of pain reduction after pharmacological intervention among primi parturients.

Table 1 : Mean, Standard deviation, mean score of reduction of labour pain, t-value and level of significance of participants in experimental and comparison group

Test	Group	Mean	SD	Mean score of reduction of labour pain	t-value	Level of significance (p-value)
Pretest	Experimental Comparison	4.47 4.67	0.640 0.724			
Posttest 1	Experimental Comparison	5.27 6.80	0.594 0.676	-0.80 -2.13	5.547*	0.00
Posttest 2	Experimental Comparison	6.07 7.80	0.458 0.676	-1.60 -3.13	7.273*	0.00

*significance at 0.05 levels df – 28

Table 1 shows that in posttest 1 the mean score of reduction of labour pain in experimental group was -0.80 and in comparison group was -2.13 and in posttest 2 the mean score of reduction of labour pain in experimental group was -1.60 and in comparison group -3.133. The mean score of reduction of labour pain was lower in comparison group and higher in experimental group for posttest 1 and posttest 2 and t-value for posttest 1 and posttest 2 were 5.547* and 7.273* respectively, significant at 0.05 levels. Hence there was significant labour pain reduction after abdominal effleurage in mean posttest 1 and posttest 2 than the mean score of pain reduction after pharmacological intervention. Therefore the null hypothesis (H01) rejected and research hypothesis (H1) accepted. It reveals that abdominal effleurage was effective in reducing intensity of labour pain compared to pharmacological intervention.

DISCUSSION

Section 1 – Sample demographics

In comparison group 53.33% of participants were in the age group of 26-28years whereas in experimental group 53.33% of the participants were in the age group of 23-25years.

In the present study the researcher noticed that majority of the participants were in age group of 23-25years and 26-28years which is similar with the findings of the other research studies. This reason could be that the usual age for marriage of girls is between 20 to 28 years; hence most women become pregnant at this age. The present study is similar with a clinical trial study done to assess the effects of massage on pain and anxiety during labour conducted in selected hospital Tehran, Iran reported that majority of the participants were primiparous women with in the age group of 20 – 34 years[4].

Based on educational qualification most of the participants in the comparison (53.33%) and experimental (60%) groups were graduates. Most of participants (53.33%) in comparison group were private employees whereas majority (73.33%) of participants in experimental group was housewives.

The above findings is consistent with a study conducted at Railway hospital, Perambur on

effectiveness of rose oil massage on labour pain. All (100%) of participants in both group were educated and most (70%) of participants in experimental group whereas (65%) in comparison group were unemployed or housewives[5].

Majority of participants in comparison group (60%) and (53.33%) in experimental group had the gestational age of 39 weeks. The present study is also consistent with the findings of the study conducted in Ambala district, Haryana on effectiveness of abdominal effleurage on labour pain intensity, that majority (90%) of nullipara mothers in experimental group and 93% in comparison group had the gestation age between 37-40 weeks[6].

Section B: Effect of abdominal effleurage and pharmacological intervention on labour pain

In experimental group, during pretest 14 participants had moderate pain and one participant had mild pain before intervention, but after performing abdominal effleurage in first posttest all 15 participants reported moderate pain and during second posttest, 13 participants reported moderate pain and only two participants had severe pain. However the labour pain was increased due to progressive phenomena of labour pain.

In comparison group, during pretest, 14 participants reported moderate pain and 1 participant had mild pain before administering injection, but after administration of pharmacological intervention in first posttest, 10 participants reported severe pain and remaining 5 participants reported moderate pain and during second posttest all (15) of them reported severe pain. Hence more increase in labour pain was observed during posttest in the comparison group.

The present study findings are consistent with another study conducted in Andhra Mahila Sabha, Chennai on effectiveness of olive oil massage therapy on low back pain in labour, that in control group (90%) of the parturient mother's experienced severe pain before therapy and 100% of them experienced severe pain after therapy. In experimental group majority (93.3%) of the mother's experienced severe pain before massage therapy and 100% of them experienced moderate pain after massage therapy[7].

Section C – Effectiveness of abdominal effleurage over pharmacological intervention on labour pain among primi parturients

The mean prêttest score of labour pain in comparison group was 4.67 and mean posttest 1 and mean posttest 2 scores were 6.80 and 7.80 respectively. In experimental group mean pretest score of labour pain were 4.47 and mean posttest 1 and mean posttest 2 score of labour pain were 5.27 and 6.07 respectively. The mean pretest score is almost similar in both comparison and experimental group. The mean posttest 1 and mean posttest 2 score of labour pain intensity were not increased in experimental group (5.57 and 6.07) and were increased in comparison group (6.80 and 7.80).

In posttest 1 the mean score of reduction of labour pain in experimental group was -0.80 and in comparison group was -2.13 and in posttest 2 the mean score of reduction of labour pain in experimental group was -1.60 and in comparison group -3.133. The mean score of reduction of labour pain was lower in control group and higher in experimental group for posttest 1 and posttest 2 and t-value for posttest 1 and posttest 2 were 5.547* and 7.273* respectively, significant at 0.05 levels. Hence the research hypothesis (H_1) was accepted and null hypothesis (H_0) was rejected. Therefore abdominal effleurage was effective in reducing intensity of labour pain compared to pharmacological intervention.

The findings of the study is consistent with the results of the quasi experimental study was conducted District Ambala, Haryana on effectiveness of abdominal effleurage on labour pain intensity. Findings revealed that abdominal effleurage was having significant effect on reducing the labour pain intensity during first stage of labour [6].

CONCLUSION

Primi parturients had reduction in the labour pain as measured by the numerical pain scale. Hence, Abdominal Effleurage was found to be a cost effective procedure in reducing labour pain.

Acknowledgment: I wish to thank God Almighty for all the blessings showered upon the beginning till end of the research study. It is my privilege to express my sincere gratitude and heartfelt thanks

To all faculty members in Lisie college of Nursing and my dear parents for their love, encouragement, support, valuable suggestion, constant guidance and sustained patience to pursue this study. Otherwise this endeavor would not have been a successful completion.

Conflict of Interest: Not declared

Source of Funding: Self-funding

REFERENCE

1. Bennett VR, Brown LK. Myles textbook for midwives. 13th Edition. Churchill Livingstone: Philadelphia; 1999
2. Lowdermilk DC, Perry SE, Bobak IM. Maternity women's healthcare. 7th Edition. Mosby; St. Louis London; 2001.
3. Lowe NK. The nature of labour pain. Am J Obstet Gynecol 2002 may; 186(5): 16-24.
4. James khan. Effleurage from detoxifynow.com; 2005 August 28(3):73-74
5. Murugan L. Effectiveness of rose oil massage on labour pain among primigravida mothers. The nurse; Vol.2, No.6, Nov-Dec 2010
6. Neetu, sheoran p, Panchal r. a study to assess the effectiveness of abdominal effleurage on labour pain intensity and labour outcomes among nullipara mothers during 1st stage of labour in selected hospitals of district Ambala, Haryana. International journal of science and research (IJSR) ISSN (online): 2319-7064 index Copernicus value (2013):6.14, impact factor (2013):4.438. Volume 4 issue 1, January 2015 www.ijsr.net (licensed under creative commons attribution CC BY)
7. Jeyalakshmi S, Jamuna N. effectiveness of olive oil massage therapy upon the low back pain of parturient mothers in the first stage of labour. Nightingale nursing times; Oct 2008: 48-51.

DOI Number: 10.5958/0974-9357.2016.00099.4

Skill Training on Insulin Self-administration among Children Attending Juvenile Diabetic Clinic, SVIMS, Tirupati AP, India

Sandeep Kumar[1], A Padmaja[2]

[1]Staff Nurse, PGIMER, Chandigarh, India, [2]Professor & Vice Principal, College of Nursing, SVIMS, Tirupati, Andhra Pradesh, India

ABSTRACT

The study was aimed to assess the Skill on insulin self-administration among children attending juvenile diabetic clinic, SVIMS, Tirupati.

Objectives

- To assess the skill on insulin self-administration.
- To assess the effectiveness of skill training on insulin self-administration.
- To determine the association between skill on insulin self-administration with selected demographic variables.

Methodology: A pre experimental research design was adopted, 50 children with type 1 diabetes were selected by convenience sampling technique at juvenile diabetic clinic SVIMS Tirupati. Data collection was done by using observational checklist on insulin self administration technique.

Results : The study results revealed that out of 50 children with type 1 diabetes 48%(24) had moderate skill, 30%(15) had inadequate skill 22%(11) had adequate skill in **pre-test**. And 32%(16) had moderate skill, 68%(34) had adequate skill and none of them had inadequate skill in **post-test**.

Conclusion: Injection technique is as important as the agent being injected. However at present it would appear that the way injection technique is not improved at the same rate as the technology underpinning it. Evidence suggests that correct technique is crucial if people with diabetes are to benefit from medical advances; as much importance therefore needs to be given to injection technique as to the agent being injected.

Keywords: *Skill training, insulin self administration.*

INTRODUCTION

"Let food be thy medicine and medicine be thy food" - Hippocrates.

BACKGROUND OF THE STUDY:

Childrens are major consumers of the health care in India about 35 percent of total population are children below 15 years of age. They are not only large in number but vulnerable to various health problems and considered as special risk group[1]. Earlier infectious diseases like viral infections, mumps, chicken pox, pneumonia, diarrhoea, nutritional deficiencies are dominated childhood diseases. Today these are being replaced by non-communicable diseases like overweight / obesity and diabetes[2].

The term diabetes mellitus describes a metabolic disorder characterised by chronic hyperglycaemia with disturbances of carbohydrate, fat and protein metabolism resulting from defect in insulin secretion, insulin action or both[3]. The most common type of diabetes mellitus occurring in childhood is type 1 diabetes mellitus [4]. In this condition child will need

exogenous insulin treatment for their whole life[5].

As per international diabetes federation (2013) approximately 50% of all people with diabetes live in just three countries China (98.4 million), India (65.1 million) and America (24.2 million)[6]. India is the diabetes capital of the world. Patients suffering from diabetes are increasing, and it is hugely prevalent among youngsters[7]. Diabetes is 2nd most common chronic disease in childhood occurring in every 1 in 1500 by the age of 5 years and 1 in 350 in age of 8 years[8]. Type 1 diabetes probably accounts for 5 to 10% of all diagnosed diabetes. About 40 to 60% of persons with type 1 diabetes are younger than 20 years of age at onset[2].

Prevalence estimates that there are almost 5,00,000 children aged under 15 years with type 1 diabetes in worldwide. Largest numbers being in Europe 1,29,000 and north America 1,08,700. Countries with height estimates numbers of new cases annually were the United States 13,000, India 10,900 and Brazil 5,000[9]. In every year 78,000 new cases are diagnosed newly in worldwide[2].

The date of onset of type 1 diabetes is defined as the date of first insulin injection[10]. Syringes are the most common form of insulin delivery system, and other options, including insulin pens and pumps[11]. Among the insulin delivery system syringes are least expensive, easy to learn to use, easy accessible and allow to use one type of insulin or to combine 2 types of insulin if needed[12].

The first insulin injection was given to 14 year old Leonard Thompson on 11 January 1922. The needle used was made of steel, sharpened regularly, reused on many occasions and designed for intramuscular injections. Modern-day insulin needles have changed dramatically[13].

Child can start taking responsibility for insulin administration at around 10 - 12 years of age, but that responsibility should be given gradually. However every child's development level varies. While one child's hand skills can develop at 7 years of age that of another can be at 10 years of age. Most children older than 10 years will be able to administer their own injections or help with them. The family must involve in the education and treatment of the child, despite the child taking more responsibility[14].

Diabetes does not stop from pursuing the ambitions. Being diabetic might mean a change in lifestyle. It does not mean you will not be able to pursue your career effectively[15].

Self-care is important for all children with diabetes[16]. But children are fearful of self-injection of insulin and would prefer to postpone learning. The nurse must teach the skill of administration of insulin irrespective of expressing the difficulty or fear of insulin in children[17].

Diabetic children need care in team approach. Nursing personnel has a pivotal role in educating children and their family members regarding all aspect of care including insulin therapy, dietary management, physical exercise, prevention of complications, promotion of growth, emotional, and social development[16].

NEED FOR THE STUDY

While extensive work has been done to determine and document the increasing incidence of type 2 diabetes worldwide, comparatively less attention has focused on the prevalence of type 1 diabetes, especially in the developing world[18].

Amutha A, Thai K, Viswanathan M (2013) conducted a study on Childhood and Adolescent Onset Type 1 Diabetes in India. The results revealed that Type 1 diabetes probably accounts for 5 to 10% of all diagnosed diabetes. This study reveals the information regarding incidence and prevalence of type 1 diabetes in India by reviewing the information from clinic based[2].

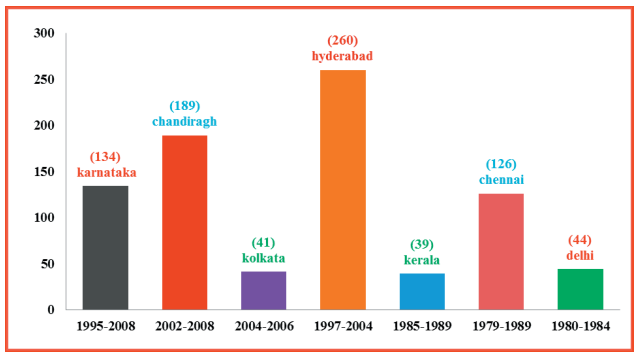


Fig.1. Prevalence of type 1 diabetes reported in India[2].

The American diabetic association recommends assessing self-management skills and knowledge of diabetes at least annually and providing or encouraging continuing education is considered the cornerstone of

treatment for all people with diabetes[19].

Correct subcutaneous injection technique may be defined as one that reliably delivers medication into the subcutaneous tissue without leakage and with minimal discomfort[12]. Injection technique is as important as the agent being injected. However at present it would appear that the way injection technique is taught has not improved at the same rate as the technology underpinning it. Evidence suggests that correct technique is crucial if people with diabetes are to benefit from medical advances; as much importance therefore needs to be given to injection technique as to the agent being injected[20].

SVIMS is a sophisticated super speciality hospital in Tirupati, Andhra Pradesh conducting juvenile diabetic clinic for the children those who were suffering with type 1 diabetes on every second Saturday. In that clinic we observed that Most of the children were taking insulin by self and some children were administered by their parents although they are having appropriate age to take self administration. So I interested to assess the children skill on insulin self administration to motivate and educate them to be independent in their diabetic managment.

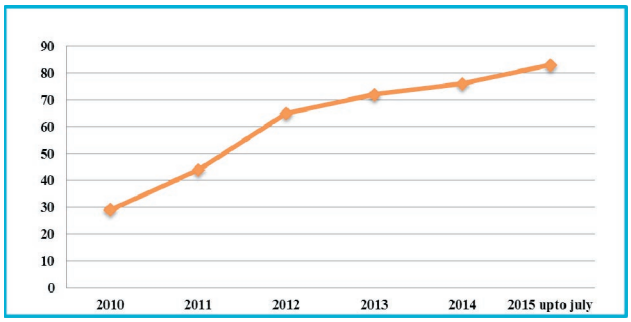


Fig.2. Prevalence of type 1 diabetes in juvenile diabetic clinic SVIMS Tirupati.

MATERIALS & METHOD

Research Design: Pre-experimental one group pre-test post-test research design.

Setting Of The Study: Juvenile diabetes clinic SVIMS Tirupati

Population: Children attending juvenile diabetic clinic SVIMS Tirupati.

Sample Size: 50 children those who were administering insulin them self.

Sampling Technique: Non-probability Convenient Sampling Technique

CRITERIA FOR SAMPLE SELECTION:

Inclusion Criteria:

- Children between the age group of 7 – 18 years with type 1 diabetes.
- Children who were administering insulin them self by insulin syringe.

Exclusion Criteria:

- Children those who were administering insulin by using other than insulin syringe.

INSTRUMENT:

The instrument was organized under the following.

Part I - Socio demographic data. That consists with basic information related to children and his history of illness.

Part II – Observational checklist. That consists with 25 questions on procedure regarding insulin self-administration with insulin syringe.

Score interpretation:-

Scoring key was prepared for part I by coding the socio demographic data. In part II each correct performance has a score of 1 mark and wrong performance scores 0. The maximum score was 25.

CONTENT VALIDITY:

Tool was given to 10 experts constituting endocrinologists, pediatricians and child health nursing personnel.

RELIABILITY OF THE TOOL:

The reliability of the tool was established by using spilt-half method. The reliability of tool was r =0.93.

DATA COLLECTION PROCEDURE

Fifty children were selected by convenience sampling technique. Written consent was obtained after explaining the purpose of study. Subjects were available in only second Saturday in every month so to reduce length of waiting for data collection and protect the accuracy of skill observation subjects were divided into 5 groups. Four investigators were selected and trained in method of data collection and insulin injection technique. For data collection 5 stations were established. Investigators including researcher were allotted to each station. Children were made to sit comfortably in the chair in front of the investigator and while administering insulin

themselves data was collected by using observational checklist. Pretest was conducted for 10 minutes and skill training was given on insulin self-administration for 45 minutes and post test was conducted 7 days after the skill training programme.

DATA ANALYSIS: Descriptive (Percentage, mean, standard deviation) and inferential ('t' test, Chi-square) statistics were used.

FINDINGS

Table-1: Distribution of level of skill on insulin self-administration among children with type 1 diabetes in pre-test and post-test. n=50

S.NO	VARIABLE	INADEQUATE		MODERATE		ADEQUATE	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1.	PRE-TEST	15	30	24	48	11	22
2.	POST-TEST	-	-	16	32	34	68

Table-1:- Shows that out of 50 children with type 1 diabetes 48%(24) had moderate skill, 30%(15) had inadequate skill and 22%(11) had adequate skill in pre-test. And 32%(16) had moderate skill, 68%(34) had adequate skill and none of them had inadequate skill in post-test on insulin self-administration.

TABLE-2: Effectiveness of skill training programme on insulin self-administration among children with type 1 diabetes. n=50

S.NO	VARIABLE	MEAN	SD	t- VALUE	P- VALUE	SIGNIFICANCE
1.	PRE-TEST	15.72	3.68	18.513	0.000	**
2.	POST-TEST	21.68	3.13			

Note: ** (significance at 0.01 level).

TABLE-2:- It indicates that there is a significant improvement in the skill on insulin self-administration among children with type 1 diabetes at $P < 0.01$ level after skill training programme.

TABLE-3: Association between demographic variables and level of skill on insulin self-administration among children with type 1 diabetes in Pre-test and Post-test. n=50

S. no	DEMOGRAPHIC VARIABLE	Chi-square	P value	Significance	Chi-square	P value	Significance
		PRE-TEST			POST-TEST		
1.	Age	24.781	0.000	**	24.781	0.000	**
2.	Educational status	28.370	0.000	**	17.557	0.002	**
3.	Duration of illness	9.345	0.049	*	3.768	0.152	NS
4.	Duration of insulin self-administration	24.340	0.000	**	14.338	0.001	**
5.	Insulin self-administration started at the age of	9.359	0.050	*	5.563	0.062	NS
6.	Injection site problems	27.010	0.079	NS	26.497	0.002	**
7.	Times attended for insulin injection training programme	30.842	0.000	**	16.700	0.001	**
8.	Previous source of information regarding insulin self-administration	9.359	0.009	**	3.788	0.50	*

Note: ** (significance at 0.01 level)

* (significance at 0.05 level)

NS (not significant)

TABLE-3:- It reveals that there is a significant association between level of skill on insulin self-administration with age, education, duration of insulin self-administration, times of attendance to insulin injection training programme and previous source of information regarding insulin self-administration at $P < 0.01$ level and duration of illness and insulin self-administration started age at $P < 0.05$ level in **pre-test.** And age, education, duration of insulin self-administration, injection site problems and times attended to insulin injection training programme at $P < 0.01$ level and previous source of information regarding insulin self-administration at $P < 0.05$ level in **post-test.**

DISCUSSION

Life is a dynamic process. It starts from birth and ends into death. In between different stages of life with different diseases may come. Type 1 Diabetes is also one type of chronic disease that starts from mostly in childhood and between the life span but it ends with the end of life only. Child suffering with type 1 diabetes should take insulin throughout their life from the onset of diagnosis to till death.

The first objective of the study was to assess the skill on insulin self-administration among children with type 1 diabetes.

In present study table-1 revealed that out of 50 children with type 1 diabetes 48%(24) had moderate skill, 30%(15) had inadequate skill and 22%(11) had adequate skill in pre-test. And 32%(16) had moderate skill, 68%(34) had adequate skill and none of them had inadequate skill in post-test.

The results of the present study supported by earlier study conducted by Azza Darwish et al in 2011 to assess Self Care Management of School Age Diabetic Children in Tanta University. The study was carried out with 60 children with type 1 diabetes between the age group of 7 to 11 years[16].

The second objective of the study was to assess the effectiveness of skill training on insulin self-administration among children with type 1 diabetes.

In present study table-2 revealed that there is a significant improvement in the skill on insulin self-administration among children with type 1 diabetes at $P < 0.01$ level after skill training programme.

The results of the present study were supported by earlier study conducted by Ayfer Ekim, Hatice Pek in 2010 to assess Insulin administration skills of children with type 1 diabetes in Trakya University turkey. The study was carried out with 45 children aged 7 to 18 years[14].

The third objective of the present study was to determine the association between skill on insulin self-administration and selected demographic variables of children with type 1 diabetes.

In present study table-3 revealed that there is a significant association between skill on insulin self-administration with age, education, duration of insulin self-administration, times of attendance to insulin injection training programme and previous source of information regarding insulin self-administration at $P < 0.01$ level and duration of illness and insulin self-administration started age at $P < 0.05$ level in **pre-test**. And age, education, duration of insulin self-administration, injection site problems and times attended to insulin injection training programme at $P < 0.01$ level and previous source of information regarding insulin self-administration at $P < 0.05$ level in **post-test**.

The results of the present study were supported by earlier study conducted by A Surendranath, B Nagaraju, GV Padmavathi et al in 2011to assess the knowledge and practice of insulin self-administration among 60 patients with diabetes mellitus in Kolar[3].

CONCLUSION

Insulin therapy is one of the most important factor of type 1 diabetes management, and can only be possible with the right insulin administration. It is necessary for children with diabetes to have enough knowledge and capability to take responsibility for their own insulin treatment. During childhood it is important for the family to take responsibility and gradually make their child to be responsible as his or her age increases while their role as a supervisor continues. So correct technique is crucial if children with diabetes are to benefit from medical advances;

as much importance therefore needs to be given to injection technique as to the agent being injected.

A**cknowledgement:** I like to extend my sincere thanks to the Director and Vice chancellor **Dr.B.VENGAMMA,** Professor and H.O.D of Neurology, **Dr. P. SUDHA RANI,** M.Sc (N)., Ph.D., Principal I/C College of Nursing, **Dr. ALOK SACHAN** MD, DM Professor, & Head of Department of endocrinology and research committee members of college of nursing SVIMS, Tirupati. Last but not least I express my gratitude to all the **subjects** for their Participation and co-operation for the study.

Ethical Clearance- Taken from scientific research ethics committee, faculty of nursing, SVIMS.

Source of Funding- Self

Conflict of Interest - Nil

REFERENCES

1. Datta. Pediatric nursing. JAYPEE brothers medical publishers (P) Ltd; 2010;1
2. Amutha A, Thai K, Viswanathan M. Childhood and Adolescent Onset Type 1 Diabetes in India. MGM J Med Sci 2013;1(1):46-53.
3. A Surendranath et al. A study to assess the knowledge and practice of insulin self-administration among patients with diabetes mellitus. Asian J Pharm Clin Res 2012;5(1): 63-66
4. Munib A. Alzubaidi. Cutaneous complications of insulin therapy in patients with Type1 diabetes mellitus. J Fac Med Baghdad. 2009; 51(4): 353-356.
5. American Diabetes Association. Diabetes Care. 2015; 38:
6. http://dx.doi.org/10.14496/dia.1105045828.8.
7. http://www.hindustantimes.com/wellness/suffering-from-diabetes-fight-it-like-your-favourite-b-town-celebs/article1-1284833.aspx
8. Parthsaradhi.A. IAP textbook of paediatrics. 5th edition. JAYPEE publications; 2014.
9. Chris Patterson et al. diabetes in the young-a global view and worldwide estimates of number of children with type 1 diabetes. Diabetes research and clinical practice 103. 2014; 161-175.
10. Global IDF/ISPAD Guideline for Diabetes in Childhood and Adolescence. International diabetes federation. 2011.
11. http://www.diabetes.org/living-with-diabetes/treatment-and care/medication/insulin/insulin-routines.
12. http://www.diabetesexplained.com/insulin-syringe.html.
13. Theresa Torrance. Effect of insulin needle reuse, size and site of injection on the risk of bending and breaking. Journal of Diabetes Nursing. 2008; 12(1): 29-33.
14. Ayfer Ekim, Hatice Pek. Insulin administration skills of children with type 1 diabetes. Journal of diabetes nursing. 2010; 14(2): 70-74.
15. http://www.medicalnewstoday.com/info/diabetes/famousdiabetics.php.
16. AzzaDarwish, Ebtisam El-sayed, Thanaa El- Awany and Rasha El-Ashry. Self Care Management of School Age Diabetic Children. Nature and Science 2011;9(12):180-189]. (ISSN: 1545-0740). http://www.sciencepub.net.
17. Latha.T et al. training on improving the competency level of self-administration of insulin among type 2 diabetes patients. NUJHS. 2013; 3(3): 42-47. ISSN 2249-7110.
18. Kalra et al. Prevalence of type 1 diabetes mellitus in Karnal district, Haryana state, India. Diabetology& Metabolic Syndrome 2010 2:14.
19. Susan L. Norris et al. Increasing Diabetes Self-Management Education in Community Settings A Systematic Review. American Journal of Preventive Medicine. 2002;22(4s).
20. Julia Pledger, Debbie Hicks, Fiona Kirkland, Su Down. Importance of injection technique in diabetes. Journal of Diabetes Nursing. 2012; 16(4):160-165.

DOI Number: 10.5958/0974-9357.2016.00100.8

A Descriptive Study to Assess the Risk Profile, Clinical Presentation and Treatment Seeking Behavior of Patients with Coronary Artery Disease (CAD) at Selected Hospital, Coimbatore

Mangaiyarkkarasi K

Assistant Professor, Department of Medical Surgical Nursing, Narayana Hrudayalaya College of Nursing, Bangalore

ABSTRACT

Introduction: Coronary artery disease is a very common, often "silent killer" of hundreds of thousands of people per year. It is a disease that affects the coronary arteries, which run along the outside of the heart. The function of these vessels is to provide rich of oxygen, nutrients and remove carbon dioxide. Coronary artery disease is the most common type of heart disease and the leading cause of death worldwide. The most common form of heart disease is caused by arteriosclerosis, generally known as coronary heart disease, hardening and/or thickening of the arteries.

Objectives: 1. Assess the risk profile of patients with CAD.2.Assess the clinical presentation of patients with CAD. 3. Assess treatment seeking behavior of patients with CAD. 4. Assess gender difference in risk profile & clinical presentation of patients with CAD.

Method: Descriptive research design was conducted in Cardiac ward, coronary care unit, & cardiology outpatient department at selected hospital, Coimbatore. The sample size was 150.

Non- probability convenient sampling technique was used for the study. The data were analyzed by using descriptive, inferential statistical methods.

Results: Majority of patients have risk factor likes increased waist circumference (70%), non-vegetarian diet habits (68.7%), sedentary work (66.7%) and increased BMI (64%) in both men and women. Majority (15.3%) of patients experienced the quality of pain as pressure. 44% of patients experienced pain at the center of chest. Pain radiation to left shoulder was present among 14% of patients. Pain was persisted for more than 30 minutes in 33.3% of patients. Ingestion of heavy food was a common precipitating factor among 10% of patients. Majority of patients (74.7%) got relieved from pain by administration of nitrate drugs. 20% of patients had diaphoresis as an associated symptom. Chest pain was the important complaints to seek medical advice. 135 patients were on regular treatment. Out of 150 patients, 46.7% of patients had an event of MI. 40% of patients arrived to hospital within 1 to 3hrs of onset of symptoms. Chi square value showed that there is an association between gender and waist circumference, diet, job. 26% of male patients experienced the quality of pain as pressure. Heaviness in the chest was present among 37% of female patients. 44.4% of male patients had pain from 15 to 30 minutes. Pain was persisted for more than 30 minutes in 53.3% of female patients. Chi square value showed that there is an association between gender and duration of pain, associated symptoms.

Conclusion: CAD is the leading cause of death in the world. Everyone should have awareness to prevent the occurrence of CAD.

Keywords: *assess, risk profile, clinical presentation, treatment seeking behavior, coronary artery disease.*

INTRODUCTION

India is experiencing an alarming increase in heart disease. Cardiovascular disease accounted for 32% of all deaths in 2000, and the World Health organization estimates that 60% of the world's cardiac patients will be Indian by 2010. As expected, cardiovascular disease mortality rates tend to be higher in urban than in rural areas much among the upper and middle classes. In 2012, cardiovascular disease were the leading cause of non communicable disease deaths (17.5 million deaths) [1].

The first systematic investigation of heart disease among people of Indian origin was Coronary Artery Disease in Indians (CADI) study. The study found that the prevalence of heart diseases in New Delhi and Chennai was about 10% and 11% respectively, slightly higher than the 10% rate among the Indian participants on the American based CADI study. By 2020, according to the WHO the number of Indian citizens dying each year from heart disease will exceed 2-4 millions, more than twice the number in 1990. One of every four cardiac patients in the world will be Indian[2].

Denis Xavier (2008) conducted research in Bangalore among 21,000 coronary patients admitted to 89 hospitals across 50 cities across the country. They found that of 20,468 patients given a definite diagnosis, 60% showed evidence of a heart attack, compared with 40% in developing countries. On average people took 300 minutes to reach a hospital, twice as long as in rich nations[3].

MATERIAL & METHOD

The objectives of the study were:

1. To assess the risk profile of patients with CAD.

2. To assess clinical presentation of patients with CAD.

3. To assess treatment seeking behavior of patients with CAD.

4. To assess the gender difference in risk profile and clinical presentation of patients with CAD.

Research approach: Quantitative approach was used to accomplish the objectives.

Research design: Descriptive research design adopted for this study.

SAMPLE SIZE: The sample size was 150.

SAMPLING TECHNIQUE: Non- probability convenient sampling technique.

Setting: The study was conducted in a 500 bedded multi-specialty hospital. It also contains high-tech instruments like MRI, CT scan and 64 slice cardiac CT scan. Medical cardiology unit consists of CCU, cardiac ward and cardiology outpatient department. On an average 120 patients per day are receiving treatments in cardiology outpatient department.

Inclusion criteria

1) Patients those who are diagnosed to have CAD which includes ACS, angina and myocardial infarction.

2) Patients with CAD and other associated disease conditions like diabetes mellitus and hypertension.

3) Both male and female patients between the age group of 30 to 70 years with CAD.

Exclusion criteria

1) Patients those who are hemodynamically unstable.

2) Patients those who are unable to read and write Tamil.

DATA COLLECTION TOOLS AND TECHNIQUES:

The investigator prepared the tool after intensive review of the related literature and with guidance of experts in the field of nursing, medicine and statistics. It consists of 5 sections

Part A: Demographic profile and clinical profile

Section I

The demographic profile includes age, gender, education, occupation, income, type of family and area of living.

Section II

Clinical profile includes questionnaire related to previous history of diabetes mellitus, hypertension. Bio-physiological measurements like height, weight, blood pressure, lipid profile, blood sugar and glycosulated hemoglobin.

Part B: Risk profile

A structured interview questionnaire consists of 25 questions related to risk factors like age, gender, heredity, elevated serum cholesterol, and habits of alcohol, smoking.

Part C: Clinical presentation

A questionnaire related to symptoms of CAD like type of pain, duration, relieving factor, associated symptoms and other manifestations. Other investigations like cholesterol, blood sugar, ECG, Echo and angiogram.

Part D: Hospital anxiety and depression scale

The hospital anxiety and depression scale (Zigmond & Snaith, 1983) was used to assess anxiety and depression level. The instrument includes 14 items measured on a four option scale. The first seven questions used to measure anxiety level and last seven questions used to measure depression level. The total score of the tool is from 0 to 21. Normal level is 0 to 7, borderline abnormal level is 8 to 10, and abnormal level is 11 to 21.

Part E: Treatment seeking behavior

This consists of questions related to arrival to hospital after the onset symptoms, duration and reason for delayed treatment.

DATA ANALYSIS PLAN:

Collected data was analyzed by using descriptive and inferential statistics.

SECTION: A

Table 1: Distribution of patients according to their demographic characteristics.

S. No.	Demographic variables	Number (N = 150)	Percentage
1.	**Sex**		
	Male	123	82
	Female	27	18
2.	**Age**		
	30 – 40 Years	9	6
	40 – 50 Years	40	26.6
	50 – 60 Years	53	35.4
	60 – 70 Years	48	32
3.	**Education**		
	Primary	37	24.7
	Secondary	31	20.6
	Degree	54	36
	Illiterate	28	18.7
4.	**Occupation**		
	Professional	4	2.7
	Non professional	114	76
	Unemployed	32	21.3
5.	**Monthly income**		
	< Rs.5,000	29	19.3
	Rs.5,000 – 10,000	50	33.3
	Rs. 10,000 – 15,000	36	24
	> Rs. 15,000	35	23.4
6.	**Family type**		
	Nuclear	116	77.3
	Joint	34	22.7
7.	**Area of Residence**		
	Urban	93	62
	Rural	57	38

SECTION: B

Table 2: Distribution of patients according to their clinical profile

S. No.	Clinical Profile	Number (N=150)	Percen-tage %
1.	**Cholesterol**		
	>200 mg / dl	57	38
	< 200 mg / dl	93	62
2.	**Fasting blood sugar**		
	>100 mg / dl	34	22.7
	65 – 100 mg / dl	116	77.3
3.	CPK –MB		
	>5ng / ml	68	45.3
	< 5ng / ml	18	12
	Not done	64	42.7
4.	**Troponin T**		
	>0.1ng / ml	45	30
	Up to 0.1ng/ml	14	9.3
	Not done	91	60.7
5.	**Electro cardiograph**		
	AWMI	53	35.3
	IWMI	27	18
	IPWMI	29	19.3
	Angina	37	24.7
	Normal	4	2.7
6.	**Echo Cardiogram**		
	AWMI	57	38
	IWMI	30	20
	IPWMI	30	20
	Angina	7	4.7
	Normal	26	17.3
7.	**Treadmill test**		
	Positive	40	26.7
	Not done	110	73.3
8.	**Coronary angiogram**		
	Single vessel disease	77	51.3
	Double vessel disease	11	7.3
	Triple vessel disease	45	30
	Not done	17	11.4

SECTION: C

Table: 3 Distribution of risk factors in patients with CAD.

S. No.	Risk factors	Number (N=150)	Percen-tage (%)
1.	**Family history**		
	Yes	39	26
	No	111	74
2.	**BMI**		
	>25 kg/m2	96	64
	< 25 kg/m2	54	36
3.	**Waist Circumference(WC)**		
	Increased	105	70
	Normal	45	30
4.	**Job**		
	Sedentary work	100	66.7
	Moderate work	41	27.3
	Heavy work	9	6
5.	**Smoking**		
	Smoker	64	42.7
	Non-smoker	86	57.3
6.	**Alcohol**		
	Alcoholic	42	28
	Non-alcoholic	108	72
7.	**Diet**		
	Non-vegetarian	103	68.7
	Vegetarian	47	31.3
8.	**Diabetes mellitus**		
	Diabetic	56	37.3
	Non-diabetic	94	62.7
9.	**Hypertension**		
	Hypertensive	52	34.7
	Non-hypertensive	98	65.3

SECTION: D

Table 4: Distribution of clinical presentation of patients with CAD

S. No.	Clinical presentation	Number (N=150)	Percen-tage (%)
I	**Quality of pain**		
	1. Pressure	23	15.3
	2. Strange feeling	4	2.7
	3. Fullness	2	1.3
	4. Heaviness	22	14.7
	5. Dull	3	2
	6. Burning	21	14
	7. Crushing	2	2.3
	8. Constricting	6	4
	9. Aching	3	2
	10. Tightness	2	1.3
	11. Choking	4	2.7
	12. Shooting / Knifelike / stabbing	5	3.3
	13. Tingling	2	1.3
	14. Sharp	8	5.3
	15. Squeezing	1	0.7
I. a	**Combined quality of pain**		
	1. Pressure and heaviness	4	2.7
	2. Pressure and strange feeling	3	2
	3. Pressure and constricting	2	1.3
	4. Strange feeling and burning	3	2
	5. Fullness and burning	4	2.7
	6. Heaviness and tightness	3	2
	7. Burning and choking	4	2.7
	8. Shooting and sharp	2	1.3
II	**Location**		
	1. Localized pain	15	10
	2. Generalized pain	14	9.3
	3. Center of chest	66	44
	4. Left side of chest	32	21.3
	5. Right side of chest	6	4
III	**Pain radiation**		
	1. Neck		
	2. Jaw	5	3.3
	3. Right shoulder	5	3.3
	4. Left shoulder	10	6.7
	5. Inner palm	21	14
	6. Left arm	2	1.3
	7. Right arm	11	7.3
	8. Center of back	9	6
	9. Throat	6	4
		2	1.3
IV	**Duration**		
	1. <5 minutes	15	10
	2. 5-15 minutes	33	22
	3. 15-30 minutes	35	23.3
	4. > 30 minutes	50	33.3
V	**Precipitating factor**		
	1. Emotional outburst	4	2.6
	2. Constipation	2	1.2
	3. Ingestion of heavy food	10	10
	4. Deep sleep	4	2.6
	5. Position changes	4	2.6
	6. Deep breathing	5	3.3

Cont...Table 4: Distribution of clinical presentation of patients with CAD

VI	**Relief of pain**		
	1. Rest	20	13.3
	2. Drugs	112	74.7
	3. Change in position	2	1.2
VII	**Associated symptoms**		
	1. Anxiousness	5	3.3
	2. Shortness of breath	25	16.7
	3. Nausea	10	10
	4. Vomiting	2	1.2
	5. Diaphoresis	30	20
	6. Vertigo	13	8.7
	7. Light headedness	5	3.3
	8. Palpitation	13	8.7
	9. Feeling of impending doom	6	4
	10. Loss of consciousness	6	4
	11. General weakness	12	8
	12. Fatigue	5	3.3
	13. Indigestion	4	2.6
	14. Belching	5	3.3
VIII	**Other manifestation**		
	1. Discomfort	6	4
	2. Shortness of breath	8	5.3
	3. Other	3	2
IX	**Hospital anxiety and depression scale**		
	1. **Anxiety**	104	69.3
	a. Normal	27	18
	b. Borderline	19	12.7
	c. Abnormal		
	2. **Depression**		
	a. Normal	115	76.7
	b. Borderline	27	18
	c. Abnormal	8	5.3

SECTION: E

Treatment seeking behavior of patients with CAD

Table: 5 Distributions of treatment seeking behavior of patients with CAD

S.No	Treatment seeking behavior	Number (N=150)	Percentage (%)
1.	**Complaints**		
	1. Chest pain	90	60
	2. Indigestion	10	6.7
	3. Sweating	10	6.7
	4. Vomiting	15	10
	5. Others	25	16.6
2.	**Treatment**		
	1. Regular treatment	135	90
	2. Irregular treatment	15	10

The first objective of the study was to assess risk profile of patients with CAD.

Majority of patients (35.4%) were from 50 to 60 years of age. The incidence of CAD is rising from 40 to 60 years. 64% of patients had elevated body mass index. Waist circumference was raised among 70% of patients. 66.7% of patients were sedentary work group.

42.7% of patients had habits of smoking. Alcoholism was present among 28% of patients. 68.7% of patients consume non-vegetarian diet. 37.3% of patients were known case of diabetic and 34.7% of participants had hypertension.

The second objective of the study was to assess clinical presentation of patients with CAD.

Majority (15.3%) of patients experienced the quality of pain as pressure. Heaviness in the chest was present among 14.7% of patients.

14% of patients perceived the pain as burning. 44% of patients had pain at the center of the chest (retrosternal). 14% of participants had radiation of pain to left shoulder.

Pain was persisted for more than 30 minutes in 33.3% of patients. Ingestion of heavy food was more common precipitating factor among 10% of patients. 74.7% of patients got releived from pain by the administration of nitrate group of drugs. Majority (20%) of patients had diaphoresis as associated symptom. Second is the shortness of breath in 16.7% of patients. 5.3% of patients had only shortness of breath without chest pain. Majority of patients had no anxiety or depression.

The third objective of the study was to assess treatment seeking behavior of patients with CAD.

Majority (60%) of patients had complaints of chest pain and it was the important reason to seek medical advice. 90% of patients were on regular treatment and 10% of patients were on irregular treatment.

Out of 150 participants, 46.7% of participants had an event of MI. 81.4% of patients had the chief complaints as chest pain. 40% of patients arrived to hospital within 1 to 3 hours from the onset of symptoms. 15.7% of patients reached hospital after 6 hours from the onset of symptoms. 45.4% of patients arrived late to hospital because of late identification of symptoms.

This is consistent with the findings of Omran and Alhassan (2006). He found that chest pain was the most initial symptom in both men and women[5].

The fourth objective of the study was to assess gender difference in risk profile and clinical presentation of patients with CAD.

40.7% of male patients had family history of CAD. Whereas, only 18.5% of female patients had family history of CAD. Body mass index was increased among 74% of male patients and 55.6% of female patients.

All the female patients had increased waist circumference which may be attributed to sedentary lifestyle and post pregnancy related changes. 85.2% of female patients were on sedentary work. Male patients had habits of smoking and alcoholism. 74% of male and 51.9% of female patients consume non-vegetarian diet. 44.4% of female patients had diabetes. Where as, only 26% of male patients had diabetes. 55.6% of female patients and 33.3% of male patients were hypertensive.

Majority (88.9%) of female participants were in post menopausal stage.

Chi-square analysis at .05 level of significance showed that there is an association between gender and waist circumference, diet and job.

Majority (26%) of male patients experienced the quality of pain as pressure. 37% of female patients experienced heaviness in the chest. The finding of the present study is consistent with the study done by Devon and Zerwic which also showed pressure as more common quality of pain among men[4].

Majority of male (59.2%) and female (51.9%) patients perceived pain at the center of chest. 18.5% of female patients had pain radiation to left shoulder. 14.8% of male patients experienced pain radiation to right and left shoulder. 44.4 % of male patients had pain duration of 15 to 30 minutes. Pain persisted for more than 30 minutes in 33.3% of female patients. Ingestion of heavy food was the common precipitating factor among both the gender. 7.4% of female patients had discomfort and other symptoms like throat congestion and indigestion than chest pain. Shortness of breath was present among 7.4% of male patients.

This is consistent with the findings of Omran and Alhassan (2006). The four most associated signs and symptoms reported by men and women were general weakness, sweating, nausea and fatigue[5].

CONCLUSION

In the current era, people are leading hectic, stressful life. They don't have time to look after their health. Stress is also an important risk factor of CAD. Stem cell transplantation, 128 slice cardiac CT scan is on the rise. On flipside CAD continues to grow in prevalence as the incidence of atherosclerotic risk factor escalates.

Acknowledgement: The author is thankful to chairman, principal, doctor and nurse for giving permission to carry over the study and also extent the thanks to the participants.

Above all I thank God, the Almighty, for all the successes and blessings in my life.

Conflict of Interest: None

Source of Funding: Funding of this project was supported by the primary researcher itself.

Ethical Clearance: Obtained from the concerned institution.

REFERENCES

1. WHO, Deaths from cardiovascular disease. Retrieved from http://www.int/gho/ncd/mortality_morbidity/cvd/en.
2. Venkatesh,G., Ramanathan,M., Reddy,CJ., and Reddy,KN., (2005). Prevalence of coronary risk factors in Indian population vis-à-vis Framingham cohort. Indian Heart Journal.57:433.
3. Danish Xavier (2008). Heart disease overwhelms India. 25th April.
4. Zerwic J and Devon.H.A. (2003). The symptoms of unstable angina: Do men and women differ. Nursing Research. Mar/Apr; 52(2).
5. Omran.S and Alhassan.M (2006). Gender differences in signs and symptoms presentation and treatment of Jordanian infarction patients. International journal of Nurse Practitioner. Aug; 12(4): 1998-204.

DOI Number: 10.5958/0974-9357.2016.00101.X

Stress and Quality of Sleep of Customer Care Executives

Pawan Singh Rawat[1], Mahalingam Venkateshan[2], Atul Kumar[3], Jasvinder Kaur[4], Priyanka Rawat[4]

[1]Lecturer , Subarathi College of Nursing, Dehradun, Uttarakhand, India, [2]Assistant Professor, [3]Lecturer, Himalayan College of Nursing, SRHU, Dehradun, Uttarakhand, India, [4]Student Nurse, Himalayan College of Nursing Dehradun

ABSTRACT

Introduction: A 'call centre' (or 'contact centre') is a work area or workplace specifically dedicated to the use of telephone and/or computer technology that provides value-added services to clients. For many employed in the call center sector, "the daily experience is of repetitive, intensive and stressful work, which frequently results in employee "burnout". Besides, the stress, the working hours of call centers may cause sleep disturbances and disturbances in biological rhythm. **Methodology**: A quantitative research approach with Descriptive Survey Research Design was used for the study to assess the Incidence and relationship between occupational stress and quality of sleep. The universe of study population comprised of customer care executives(CCE). The study was conducted in Multi-National Company (call centers). Convinient sampling technique was used to select the 100 subjects from the population. Occupational stress scale (OSS) and Pittsburg sleep quality index (PSQI) scale was used to measure the Occupational stress and quality of sleep among customer care executives. **Results:** Majority (89%) of Customer care executives had poor sleep quality and two third (63%) of customer care executives experiencing occupational stress "Rarely or occasionally". In Occupational stress & sleep quality, Pearson's Correlation(r) value is 0.576 and p-value is 0.001, which shows there is a significant relationship between occupational stress and sleep quality. **Conclusion:** The study shows that majority of the customer care executives reported poor Quality of Sleep, while occupational stress found in many of the customer care executives.

Keywords: *Customer care executives, Incidence, Occupational stress, Quality of sleep.*

INTRODUCTION

Call centers are a relatively recent phenomenon made possible by the dissemination of telecommunications and information technologies. The technology enables telephone service representatives to deal quickly and remotely with customer needs by connecting the representative to the customer's account information on his/her computer as the call are relayed to the headset. It is comprised of people whose primary function is to respond to inbound and/or outbound telephone traffic. Call handler an employee whose job requires them to spend a significant proportion of their working time responding to calls on the telephone whilst simultaneously using display screen equipment (DSE). [(1)]

Sleep disorders are the most severe ailment affecting people working in Indian call centers. A high proportion of workers faced sleep disturbances and associated mental stress and anxiety. Sleep disturbance and anxiety was significantly more in international call centers compared to domestic. Many sleep disorders like insomnia are common in the employees, as the biological clock takes time to acclimatize, which never happens completely, because as one adjusts to the time, the shift might change.[(2)]

Corresponding author:
Mr. Mahalingam Venkateshan
Assistant Professor, Himalayan College of Nursing, SRHU, Dehradun, Uttarakhand, India.
Email Id: milkymaha2007@gmail.com
mvenkatesh@arhu.edu.in Mob:919719874259.

As call centers can be centralized in locations far from the customers of a business, they allow firms to cut costs by reducing the number of local service outlets. There has been considerable research on call centers with much academic interest focused on the labor process used in call centre employment and a common theme of the international research has been the criticism of the call centre workplace and the practices used within it. Many studies demonstrate that stress and the nature of call centre jobs leads to the high levels of staff attrition, sickness and/or health problems.[3] Based on the literature support and investigator field experience the study was aimed to measure the Incidence and Relationship between occupational stress and quality of sleep among customer care executives.

HYPOTHESIS

H_1: There will be a significant relationship between occupational stress & quality of sleep among customer care executives.

H_2: There will be a significant association between occupational stress and demographic variables.

H_3: There will be a significant association between sleep quality and demographic variables.

MATERIALS AND METHOD

A quantitative approach with Descriptive Survey Research Design was carried out to study the Incidence and relationship between occupational stress and quality of sleep. The universe of study population comprised of customer care executives (CCE). The customer care executives like age below 40 yrs, belong to B.P.O (multi-national company) and who were available at the time of data collection were included in the study. The customer care executives were selected by convenient sampling technique. On the basis of standard sample size calculation total 100 subjects were recruited for the study. Occupational stress scale (OSS) and Pittsburg sleep quality index (PSQI) scale was used to measure the Occupational stress and quality of sleep among customer care executives. Formal permission was obtained taken from the manager of B.P.O and informed written consent was obtained from each participant before starting data collection. Assurance was given to the subjects that the anonymity of each individual will be maintained.

RESULTS

Table 1: Frequency and percentage distribution of care givers according to their selected Demographic characteristics. **N=100**

S.No	Sample characteristics		Frequency	Percentage (%)
1.	Age (years)	15-20	12	12%
		21-25	28	28%
		26-30	43	43%
		31-35	17	17%
2.	Gender	Male	51	51%
		Female	49	49%
3.	Marital status	Married	30	30%
		Unmarried	60	60%
		Widow	3	3%
		Divorced	7	7%
4.	Religion	Hindu	52	52%
		Muslim	13	13%
		Sikh	18	18%
		Christian	17	17%
5.	Dietary pattern	Vegetarian	37	37%
		Non- vegetarian	63	63%
6.	Monthly income	5000-10,000	86	86%
		10,001-15000	14	14%

Table no.1 shows that

- Less than half (43%) participants fall under age group of 26-30 years and one fourth (28%) people fall under age group of 21-25years.
- Both Male & female (51% and 49%) were equally participated in the study.
- Approximately two-third (60%) participants were unmarried and 30% were married.
- Half (52%) of participants are been Hindu religion.
- Two third (63%) participants are Non-vegetarian and one third (37%) were vegetarian.
- Majority (86%) participants having monthly salary between Rs 5000-10000 range.

Table 2: Degree of Quality of Sleep among customer care executives. N=100

S.No	Sleep Quality	Frequency	Remarks
1.	<5	11(11%)	Normal Sleep or Good sleep
	h5	89(89%)	Poor Sleep

Table no.2 shows that the Most (89%) of the customer care executives were reported poor quality of sleep and 11% of customer care executives were reported normal or good sleeping pattern.

Table 3: Magnitude of Occupational Stress among customer care executives. N=100

S.No	Score	Frequency (%)	Remarks
1.	0 - 0.5	36(36%)	Never
2.	0.6 -1.5	63(63%)	Occasionally or Rarely
3.	1.6 -2.5	1(1%)	Frequently
4.	2.6 -3	0	Always

Table no.3 depict that the two third (63%) of customer care executives reported 'Rarely or occasionally' occupational stress and one third (36%) of Customer care executives reported "Never" experienced occupational stress.

Table 4: Relationship between quality of sleep and occupational stress.

H_1: There will be a significant relationship between Quality of Sleep and occupational stress among customer care executives. **N=100**

S.No	Variables	Pearson's correlation	p-value
1.	**Occupational stress & sleep quality.**	0.576	0.001

Table no.4 shows that there is a significant correlation between occupational stress and sleep quality among customer care executives (CCE), the Pearson's correlation value is 0.576 at p value is 0.001. Hence, it can be interpreted that research hypothesis H_1 is accepted and Null hypothesis H_{01} is rejected.

Table 5: Association between occupational stress and demographic variables.

H_2: There will be a significant association between occupational stress and demographic variables.

a) Association between Occupational stress and Age. N=100

S.No	Variables	Pearson's correlation(r)	p-value
1.	**Age** 15-20 21-25 26-30 31-35	**0.296**	**0.003**

b) Association between occupational stress and demographic variables. N=100

S.No	Variables	< 15	≥ 15	Chi-Square	P-value	
1.	**Gender**	Male	23	28	0.0004	0.983
		Female	22	27		
2.	**Marital status**	Married	16	24	0.673	0.783
		Unmarried	29	31		
3.	**Religion**	Hindu	22	30	1.07	0.748
		Muslim	6	7		
		Sikh	10	8		
		Christian	7	10		
4.	**Food practice**	Vegetarian	42	44	2.63	0.104

Table no.5 shows that age and occupational stress Pearson's correlation(r) value is 0.296 and p-value is 0.003 which is below 0.05, shows that there significant association between occupational stress and Age of customer care executives. Hence, it can be interpreted that there would be significant association between occupational stress with their Age (p=0.003). The research hypothesis H_2 is partially accepted and Null hypothesis H_{02} will be partially rejected.

Table 6: Association between Quality of Sleep and demographic variables.

H_3: There will be a significant association between sleep quality and demographic variables. N=100

S.No	Sample Characteristics	>6.5	h6.5	d.f	Chi-square	p-value	
1.	**Age**	15-20yrs	2	10	**3**	**9.962**	**0.019**
		21-25yrs	11	17			
		25-30yrs	27	16			
		31-35yrs	10	7			
2.	**Gender**	Male	23	26	1	0.960	0.689
		Female	27	24			
3.	**Marital Status**	Married	18	12	**3**	**11.80**	**0.008**
		Unmarried	23	37			
		Widow	2	1			
		Divorced	7	0			
4.	**Religion**	Hindu	28	24	3	1.059	0.787
		Muslim	5	8			
		Sikh	9	9			
		Christian	8	9			
5.	**Food Practice**	Vegetarian	22	15	1	2.102	0.214
		Non-Vegetarian	28	35			
6.	**Monthly Salary**	5000-10000	10	4	1	2.99	0.148
		10001-15000	40	46			

Table no.6 shows that there is a significant association between Quality of Sleep with their age(0.019) and marital status(0.008). Whereas, other demographic variables (gender, religion, food practice, monthly salary) are not significantly associated with Quality of Sleep at the level of 0.05 significance. Hence, it can be interpreted that research hypothesis H_3 is partially rejected and Null hypothesis H_{03} is partially accepted.

DISCUSSION

The Findings of present study shows that two third (63%) of customer care executives reported "Rarely or occasionally" occupational stress and one third (36%) of Customer care executives reported "Never" experienced occupational stress. These findings was supported by Rodwell J(2009)[4], Babu GR(2013)[5], Ajay K. Jain(2013)[6], Cristina Teresa Lim(2013)[7], Jain Shweta[8], Raja Dinesh Jeyapal , Bhasin Kumar Sanjiv (2014)[9] , Bhuyar P, Banerjee A, Pandve (2008)[10] that the customer care executives working in call centers experiencing severe occupational stress.

In the Degree of Quality of Sleep among customer care executives, Most of the customer care executives were reported poor quality of sleep and every 10th of customer care executives were reported normal or good sleeping pattern. These study findings was supported by Ramanuj Vaibhavkumar(2014)[11], Yun JA(2015)[12], Matsumoto M(1996)[13],Takahashi M(2015)[14], Flo E(2013)[15], Sun W(2015)[16], Kubota K(2014)[17] that degree of quality of sleep customer care executives are very poor. Whereas, studies done by Sveinsdottir H (2006)[18], Pilcher JJ (2000)[19] contradicted that degree of quality of sleep of customer care executives are not affected.

There is a significant relationship between occupational stress and sleep quality. These study findings consistent with Subbarayalu Arun Vijay (2013)[20], Garg Arun(2007)[21], Bose Indranil (2010)[22] and Hoefelmann. Luana P (2012)[23], Kurioka.S, Horie.S ,Inoue.A, Mafune.K, Tsuda.Y, Otsuji.Y et al(2014)[24] that there is significant relationship between pre-hypertension, quality of sleep and occupational stress.

There is a significant relationship between Occupational stress with their age. Study done by Mohajan Haradhan Kumar (2012)[25], Joy.P Jins (2013)[26], significant relationship was observed between the average degree of stress and the demographic characteristics.

Whereas study done by Rahmani A, Khodaei R (2013)[27] no significant relationship was observed between the average degree of stress and the demographic characteristic "age".

Study by Kaur R, Chodagiri VK, Reddi NK (2013)[28] on screening by GHQ-28, 35.33% of the police were found to be having psychological distress, the demographic variable "age" showed no significant association to psychological stress.

There is a significant association between Quality of sleep with their age and marital status, whereas other demographic variables (gender, religions, food practice, monthly salary) and quality of sleep no association was seen. Study done by Michael V Vitiello , Lawrence H Larsen, Karen E Moe (2005)[29], Bernadette Hood, Dorothy Bruck and Gerard Kennedy (2003)[30], Hae-Chung Yang, Sooyeon Suh ,Hyun Kim et al (2013)[31] , Khoramirad A, Mousavi M et al (2015)[32] ,Shum A, Taylor BJ et al (2014)[33] supports the present study findings that there is significant association between Quality of sleep and Age or marital status.

The methodological strength of the present study were first, the Tools and Instruments used all were standardized; Second, the study setting was randomly selected; Third, in the sample selection both male and females equally participated in the study. Also, the study was limited with certain areas like First, the investigator only relay on study participants self reported information; Second, the number of sample is less so the generalizability of the findings is been doubtful and third, the study participants were conveniently selected where no equal chance was given to all the customer care executives in the population.

CONCLUSION

The conclusion suggests that the majority of customer care executives having poor sleep quality, whereas many of the customer care executives reported occupational stress. Continuous Informative Education programs must be implicated to enhancing the knowledge to relive Occupational stress and to

improve Quality of Sleep of Customer care executives in IT sector. Some cost effective, non pharmacological techniques (relaxation method, yoga, etc) could be taught to the Customer care executives of call centers (BPO) industries.

Ethical Clearance: Ethical Committee permission was obtained from the Ethical committee of Swami Rama Himalayan University, Dehradun.

Source of Funding: Self

Conflict of Interest -Nil

REFERENCES

1. Thompson Paul, Warhurst, Chris, Callaghan George. Study of Ignorant Theory and Knowledgeable Workers-Journal of Management Studies. 2001 ;38(7): 923–942.
2. Himachali.Sanjeev. Human Issues in Call Centers and BPO Industry-A Report-Best Practice-Human resource management.
3. Bhuyar P, Banerjee A, Pandve. Mental, Physical and Social Health Problems of Call Centre Workers-Industrial Psychiatric Journal. 2008; 1(17): 21-25.
4. Health Issues amongst Call Center Employees, an Emerging Occupational Group in India-Indian Journal Of Community Medicine.2014; 39(3): 175–177.
5. Liyana. Nor, bokti. mohd, Mansor abu talib. A Preliminary Study on Occupational Stress and Job Satisfaction Among Male Navy Personnel at a Naval Base in Lumute- The Journal of International Social Research. 2009; 2(9).
6. Aghaei A, Hasanzadeh R, Mahdad A, Atashpuor SH.Occupational Stress and Mental Health of Employees of a Petrochemical Company before and after Privatization. 2010; 1(2):75-80.
7. R. Manocha, D. Black, J. Sarris and C. Stough.A Randomized, Controlled Trial of Meditation for Work Stress, Anxiety And Depressed Mood In Full-Time Workers-Evidence-Based Complementary and Alternative Medicine. 201: 8.
8. Sheena Johnson.The Experience of Work-Related Stress Across Occupations-Journal of Managerial Psychology, Emerald Group Publishing Limited. 2005: 20(2); 178-187
9. Raja Dinesh Jeyapal , Bhasin Kumar Sanjiv. Health Issues amongst Call Center Employees, an Emerging Occupational Group In India-Indian journal of community medicine. 2014: 39(3); 175–177.
10. Bhuyar P, Banerjee A, Pandve. Mental, Physical and Social Health Problems of Call Centre Workers-Industrial Psychiatric Journal. 2008 : 1(17) : 21-25
11. Ramanuj Vaibhavkumar. Level of Perceived Work Related Stress and its Effect on Behaviour Change in Call Centre Employees- International Journal of Basic & Applied Physiology. 2014:3(1); 228-231.
12. Yun J A. Association between Information Provision and Decisional Conflict in Cancer Patients. 2015; 26(9):1974-80.
13. Matsumoto M. Ataxia and Epileptic Seizures in Mice Lacking Type 1 Inositol 1,4,5-Trisphosphate Receptor. 1998: 379(6561);168-71.
14. Takahashi M .Epileptogenesis and Epileptic Maturation in Phosphorylation Site-Specific Snap-25 Mutant Mice. 2015; 115:30-44.
15. Flo E. Shift-Related Sleep Problems vary According to Work Schedule-Occup Environ Med 2013;70:238-245.
16. Sun W.Positive. Correlations between Cerebral Protein Synthesis Rates and Deep Sleep in *Macaca Mulatta*-European Journal of Neuroscience.1997; 9(2) :271–279.
17. Kubota K.Workaholism and Sleep Quality among Japanese Employees: A Prospective Cohort Study-International Journal of Behavioral Medicine. 2014; 21(1): 66-76.
18. Sveinsdottir H.Occupational Stress, Job Satisfaction, and Working Environment among Icelandic Nurses: A Cross-Sectional Questionnaire Survey-International Journal of Nursing Studies. 2006;43(7): 875–889.
19. Pilcher JJ. Differential Effects of Permanent and Rotating Shifts on Self-Report Sleep Length: A Meta-Analytic Review- Journal of Sleep Research & Sleep Medicine 2000; 23(2):155-163.
20. Kurioka S, Horie S, Inoue A, Mafune K, Tsuda Y,Otsuji Y. Risk of Progression to Hypertension

in Nonhypertensive Japanese Workers Aged 20-64 YEARS-J Hypertens. 2014; 32(2):236-44.

21. Yuli Huang. Prehypertension and the Risk Of Stroke-The official journal of American Academy of Neurology .2014;2014: 82 (13).
22. Lakshman Arjun, Manikath Neeraj, Rahim Asma and V. P. Anilakumari. Prevalence and Risk Factors of Hypertension among Male Occupational Bus Drivers In North Kerala, South India- A Cross-Sectional Study- Isrn Preventive Medicine. 2014:9.
23. Gupta R. Normotension, Prehypertension, and Hypertension in Urban Middle-Class Subjects in India: Prevalence, Awareness, Treatment, And Control-American Jnl of Hypertension, 2012; 26(1): 83-94.
24. Babu GR. India's Tryst with Creation of Public Health Cadre-Tropical medicine & public Health. 2011; 4(2): 143-144.
25. Midha T. Assessment of Sympathovagal Imbalance by Spectral Analysis Of Heart Rate Variability In Prehypertensive And Hypertensive Patients In Indian Population-Clinical and Experimental Hypertension. 2011; 33(7).
26. Erem C. Prevalence of Prehypertension and Hypertension and Associated Risk Factors Among Turkish Adults: Trabzon Hypertension Study-Journal of Public Health. 2015; 31(1):47-508.
27. Rahmani A, Khodaei R. Determination of Job Stresses and their Consequences in Drivers in Ilam-Ebsco's databases. 2013; 5:594-598.
28. Kaur R, Chodagiri VK, Reddi NK. A Study on Impact of Work Stress among Tile Factory Workers in Trichur District In Kerala-International Journal of Scientific and Research Publications, 2013;3: 2250-3153.
29. Michael V Vitiello, Lawrence H Larsen, Karen E Moe .Department of Psychiatry and Behavioral Sciences, May 2004 Published by Elsevier Inc. All rights reserved. University of Washington,56;503-510.
30. Bernadette Hood, Dorothy Bruck and Gerard Kennedy. Determinants of Sleep Quality in the Healthy Aged-Age and Ageing, 33(2);159-165.
31. Hae-Chung Yang,Sooyeon Suh,Hyun Kim, Eo Rin Cho,Seung Ku Lee, Chol Shin. Longitudinal Course of Depression Scores with and without Insomnia in Non-Depressed Individuals-A 6-Year Follow-Up Longitudinal Study in A Korean Cohort. 36(3): 369–376.
32. Khoramirad A, Mousavi M, Dadkhahtehrani T, Pourmarzi D, J Relig Health. 2015 ;54(6):2276-85.
33. Shum A, Taylor BJ, Thayala J, Chan MF , Complement Ther Med. 2014 Feb;22(1):49-56.

DOI Number: 10.5958/0974-9357.2016.00102.1

A Comparative Study to Assess the Effectiveness of Cold Application, Heparinoid Application and Magnesium-sulphate Application on Superficial Thrombophlebitis among Patients Admitted in Selected Hospital of Gujarat

Anil Sharma

Assistant Professor, Manikaka Topawala Institute of Nursing-CHARUSAT, Changa, Gujarat

ABSTRACT

Introduction: This is a comparative study to assess the effectiveness of cold application, heparinoid application and magnesium-sulphate application on superficial thrombophlebitis among patients admitted in selected hospital of Gujarat. As this was seen that every second or third patient, who have IV line suffering with superficial Thrombophlebitis. In hospital set up three different interventions used to reduce the symptoms of superficial thrombophlebitis.

The objectives: This study was conducted to assess the effectiveness of cold application, heparinoid application, magnesium-sulphate application and compare the effect of these three interventions on superficial thrombophlebitis.

Methods: The study area were private hospital cum research Centre in Gujarat, India. A total of 150 samples comprised of superficial thrombophlebitis, which randomly distributed in three intervention groups. Samples were selected by random and purposive sampling. This study utilized an evaluative research approach with quasi-experimental three-group pretest and posttest design. A superficial thrombophlebitis scale and pain intensity distress scale were used to for data collection.

Results: Researcher identified the "t" value for each intervention group and it was significant, which suggests that the cold application, heparinoid application and magnesium sulphate application is effective in reducing the signs and symptoms of superficial thrombophlebitis. Further The 'F' ratio computed of cold application group, heparinoid application group and magnesium sulphate application group (10.10) showed that three types of application differ significantly. But the mean difference of magnesium sulphate group (16.62) is higher than the cold application (15.06) and heparinoid application (15.04) group suggesting that magnesium sulphate application is most effective in reducing the superficial thrombophlebitis.

Conclusion: Patients who are receiving continuous intravenous therapy require continuous monitoring for any signs and symptoms of superficial thrombophlebitis should be treated with magnesium-sulphate application. The student and staff needs to provide education to assess the signs, symptoms and treatment of superficial thrombophlebitis. During the clinical posting students should be trained for preparing magnesium-sulphate solution and application of magnesium-sulphate solution for treating superficial thrombophlebitis.

Keyword: *Cold Application, Heparinoid Application, Megnesium-sulphate Application, Superficial Thrombophlebitis, Evidence Based Practice, Pain & Distress.*

INTRODUCTION

Intravenous infusions are an important aspect of therapy in both medical and surgical conditions. It is an outstanding fact of modern therapies that the intravenous route is the most readily practicable means of rapid or massive replacement of fluids especially for the administration of isotonic, hypertonic, blood

and blood products. Over one fourth of hospitalized patients receive intravenous therapy for fluid replacement and administration of drug.[1] It is also recognized that intravenous therapy exposes the patient to a considerable variety of hazards and less commonly to grave danger. The registered nurse is the only member of the health team who can, on a continuous basis, assumes the responsibility for regular monitoring of intravenous therapy and prevention of complication. An understanding of the factor leading to danger of complication following intravenous therapy, under existing condition of patient care would increase the possibility of planning appropriate nursing care activities that could reduce superficial thrombophlebitis.[2,3]

Superficial thrombophlebitis is defined as an inflammation of a vein and thrombus formation related to a chemical or mechanical irritation, or both.[4] It is characterized by a reddened, warm area around the insertion site or along the path of a vein, pain and tenderness at the site or along the path of a vein and swelling. The incidence of superficial thrombophlebitis is related with the length of time, I.V. line is in place, composition of fluid or medication infused, size and site of the cannula inserted, ineffective filtration, improper anchoring of the line and the introduction of microorganism at the time of insertion.[5]

Incidence of superficial thrombophlebitis often means prolonged hospitalization, loss of income of patient, increased expenditure on antibiotic and other modalities for treatment of superficial thrombophlebitis. So this study is an attempt to compare the effectiveness of cold application, heparinoid application and magnesium sulphate application on superficial thrombophlebitis among patients.

Investigator during clinical practices had experienced that there is higher incidence of superficial thrombophlebitis among patients who are receiving continuous intravenous therapy. In these conditions some patient receive either cold application, heparinoid application or magnesium sulphate application, but this is not prove that which method is most effective method for reducing the signs and symptoms of superficial thrombophlebitis. Various investigators investigate effect of cold application to reducing superficial thrombophlebitis, while some other investigator investigate effect of heparinoid application to reducing superficial thrombophlebitis and in clinical practices magnesium sulphate application uses to reducing superficial thrombophlebitis.[6]

So, in this study researcher tried through systematic process to identify the best intervention of superficial thrombophlebitis.

MATERIAL AND METHOD

This study utilized an evaluative research approach with quasi-experimental three-group pretest and posttest design.

Participants: According to sampling criteria including inclusion & Exclusion criteria patients suffering with superficial thrombophlebitis selected. Formal permission and ethical clearance got from Private hospital and research Centre of Mehsana District of Gujarat. And consent letter get signed by each participant.

Measures: A superficial thrombophlebitis scale and pain intensity distress scale were prepared by investigator. Both the scale observed by staff nurses of the hospital, which were trained and assigned for this job. The superficial thrombophlebitis scale were observing the redness, warmth at site, tenderness, hardness, swelling and loss of function of affected arm where as in pain intensity distress scale the level of pain with modified Visual Analogue scale (11 point) used.

The score classified as between 0 to 30 in four categories. Score 0 presents No superficial thrombophlebitis, score 1 to 10 stands for mild superficial thrombophlebitis, score 11 to 20 stands for moderate and score 21 to 30 stands for Severs Superficial thrombophlebitis.

Sample: Total 150 samples of superficial thrombophlebitis were selected by purposive sampling technique and later through randomization distributed randomly in three groups in three interventions.

Method: After receiving formal permissions from respective institutions or hospitals, the researchers trained five staff nurses to observe the patient and

then data collected from all three groups. Samples confidentiality maintained. After data collection of pre & Post, the score interpreted according to the tools. For ethical approval the research Centre director formal permission granted.

FINDINGS

Figure:1 showing pretest and posttest mean of superficial thrombophlebitis score of cold application. The posttest mean score is 3.34 is apparently lower than the pretest mean score 18.40. The t valve shows that there is a significant difference between pretest & posttest mean (15.06).this indicates that cold application is effective in reducing the sign & symptoms of superficial thrombophlebitis.

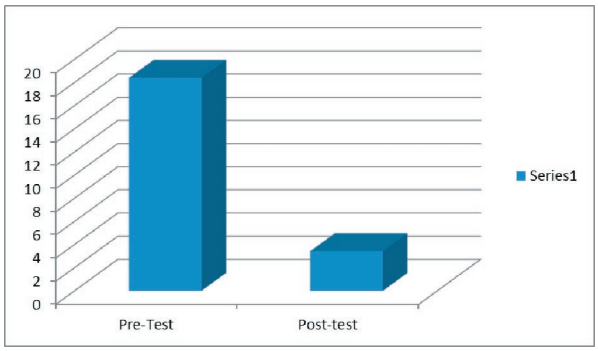


Figure 1: Bar diagram showing pre-test post-test mean superficial thrombophlebitis score of cold application

Figure:2 showing pretest and posttest mean of superficial thrombophlebitis score of heparinoid application. The posttest mean score is 3.60 is apparently lower than the pretest mean score 18.64. The t valve shows that there is a significant difference between pretest & posttest mean (15.04).this indicates that heparinoid application is effective in reducing the sign & symptoms of superficial thrombophlebitis.

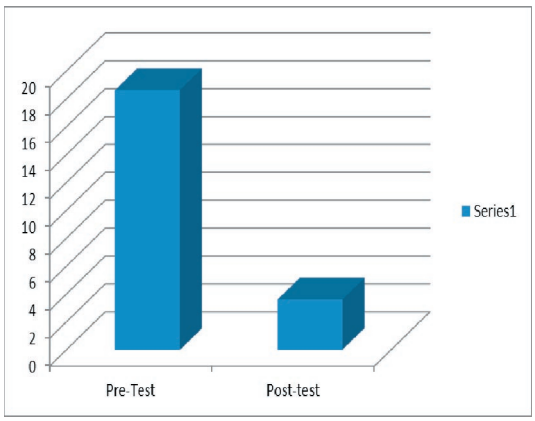


Figure 2: Bar diagram showing pre-test post-test mean superficial thrombophlebitis score of heparinoid application group

Figure:3 showing pretest and posttest mean of superficial thrombophlebitis score of magnesium-sulphate application. The posttest mean score is 2.16 is apparently lower than the pretest mean score 18.78. The t valve shows that there is a significant difference between pretest & posttest mean (16.62).this indicates that magnesium-sulphate application is effective in reducing the sign & symptoms of superficial thrombophlebitis.

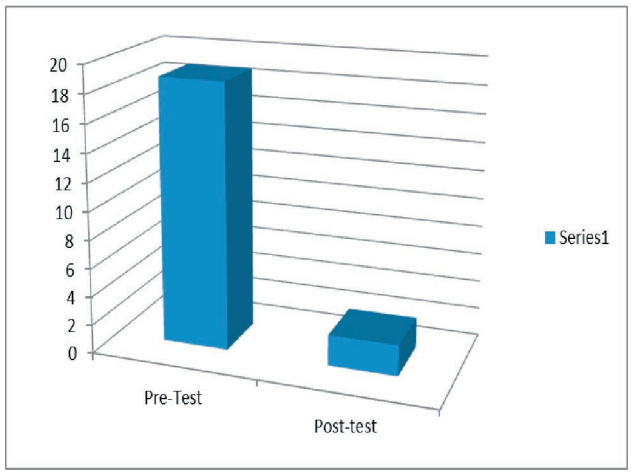


Figure 3: Bar diagram showing pre-test post-test mean superficial thrombophlebitis score of magnesium sulphate application group.

Figure:4 showing mean difference superficial thrombophlebitis score in between cold application, hepaniroid application and magnesium sulphate application group. It shows that the mean difference of magnesium sulphate is 16.62 is higher that the cold application (15.06) and hepaniroid application (15.04). This indicates that magnesium sulphate application is most effective in reducing sign & symptoms of superficial thrombophlebitis.

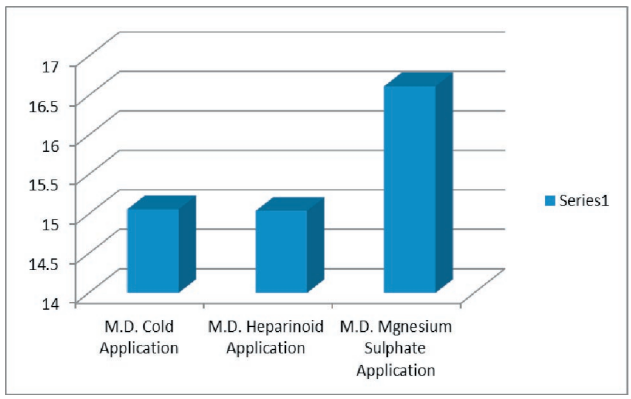


Figure 4: Column diagram showing mean difference superficial thrombophlebitis score in between cold application, heparinoid application and magnesium sulphate application group.

CONCLUSION

This study completed in four phases and result came as magnesium sulphate application is the most effective intervention to reduce the sign & symptoms of superficial thrombophlebitis.

Implications:

Nursing Practice: There is a higher incidence rate of superficial thrombophlebitis among patients receiving continuous intravenous therapy Nurses sole responsibility is for continuous monitoring of intravenous therapy and prevention of complication of intravenous therapy. The finding of this study indicated that there is a need for improving the practice of treating superficial thrombophlebitis by magnesium-sulphate application for reducing the signs and symptoms of superficial thrombophlebitis.

All the patients who are receiving continuous intravenous therapy required continuous monitoring and if any signs and symptoms of superficial thrombophlebitis should be treated with magnesium-sulphate application.

Nursing Education: This study indicates that every student should know about various factors causing superficial thrombophlebitis, signs and symptoms and treatment of superficial thrombophlebitis. The student needs to provide education to assess the signs, symptoms and treatment of superficial thrombophlebitis. During the clinical posting students should be trained for preparing magnesium-sulphate solution and application of magnesium-sulphate solution for treating superficial thrombophlebitis.

Nursing Administration: Nurse administrator should take an initiative in preparing protocol for treating superficial thrombophlebitis. This protocol should be circulated and available to all nursing units. This protocol saves the manpower, money, material and time for treating superficial thrombophlebitis and also improves the patient's satisfaction level.

Acknowledgement: I (Anil Sharma, Investigator) would like to acknowledge nursing division and Medical director of Manchhiba Hospital and Research Centre & CHARUSAT University, Changa, Gujarat, India.

Conflict of Interest: None

Source of Funding: No separate funding was received for this study.

Ethical Clearance: Granted permission form Manchhiba Hospital and Research Centre.

REFERENCES

1. Kazier, B.B. Fundamental of Patient Care. 1st ed.. Philadephia and London: W.B.Saunders Company.1968
2. Luckman & Sorensen. Medical Surgical Nursing 3rd ed, Philadelphia: W.B. Saunder's Company 1987
3. Luckman, Saunder's. Manual of Nursing Care, Philadelphia: W.B. Saunder's Company. 1997
4. Tortora, G.J.. Principles of Anatomy and Physiology, 11th ed. Hoboken, NJ: John Wiley & Sons. 2006
5. Brunner & Suddarth's. Medical Surgical Nursing, 10th ed., Philadelphia: Lippincott Williams and Wilkins.2004
6. Tgnataveius Donna, S. Medical Surgical Nursing, 2nd ed., Philadelphia: W.B. Saunder's Company.1995
7. Sharma A.K. comparative study of treatment modalities for superficial thrembophlebitis. International conference souvenir on humanities at AIIMS, New Delhi, 109 2012

DOI Number: 10.5958/0974-9357.2016.00112.4

Identification of Risk Factors Determining Attitude Towards Violence among High School Students: A Study in Schools of Trivandrum Corporation, Kerala

Jessy P S[1], Vijayakumar K[2]

[1]Assistant Professor, Government College of Nursing, Medical College, Thiruvananthapuram, Kerala,
[2]Retired Professor and Head, Department of Community Medicine, Medical College, Thiruvananthapuram, Kerala State, India

ABSTRACT

The World Health Organization defines Violence as "the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community that either result in or has a high likelihood of resulting in injury, death, psychological harm, mal-development or deprivation". Violence has a worldwide occurrence and hence India is no exception[3] The incidence of violence in India is increasing day by day to an alarming rate, especially among children of adolescent age. Every day the media brings incidents of violence involving children. The incidence of violence in the state of Kerala also is on the rise. This study was aimed to identify the risk factors which influence the attitude of high school children towards violence. A total of 1798 participants from 20 schools of Trivandrum Corporation were studied. We indentified family atmosphere, class room environment, personality factors, influence of gangs and the influence of television as risk factors as contributing to the development of attitude towards violence among the participants studied.

Keywords: *School violence, Attitude towards violence, Risk factors of violence.*

INTRODUCTION

Violence is a phenomenon originating in the mind of an individual and is hence directly related to the mindset and personality of the individual and is thus a multi-dimensional and multi-factorial attribute.[1] The occurrence of violence is increasing ever worldwide and has to be addressed seriously and require channelization of efforts of health care professionals in proper identification and recognition.[1,2]

Violence has become a major menace in India now. The incidence of violence against woman and children being is being commanding a prime attention[3,4]. The incidence of violence in India is increasing day by day to an alarming rate, especially among children of adolescent age[5]

Reports say that the death toll due to violence in 20th century approximates about 191 million- violence takes the lives of more than 1.5% million people annually on a global basis. Of this, over 50% are due to suicide, 35% due to homicide; and 12% due to some other conflict. For each single death due to violence there are so many hospitalizations. Violence may sometimes has life-long consequences for the victim's physical and mental health.[6,7]

Violence is preventable. There are numerous methods to prevent the cause of violence such as parenting education to prevent child maltreatment, life skill education for children, school based programs to address gender norms and attitudes, reducing alcohol availability, reducing access to guns, promoting gender equality and supporting the economic empowerment of women etc.[8]

Many factors are identified to contribute violent behaviour, [9] to name a few includes: low income and poverty, poor inter-personal relationships[10], use of drugs and alcohol, gender inequality,[11] unhealthy competition for resources, history of aggression, family violent belief, social or cognitive problems etc.

One of the major steps in prevention of violence is identification of the risk factors which influence and mould the attitudes and beliefs towards violence. This study was aimed to identify the risk factors which contribute to the development of attitudes towards violence among high school children.

MATERIALS & METHOD

Prior ethical clearance was obtained for the study from the Institutional Human Ethics committee of Government Medical College, Thiruvananthapuram. The study was conducted in two phases. A cross sectional survey design using self-report questionnaire was employed in the first phase of study. Attitude of children towards violence was assessed and the students were categorized in to those having high and low attitude. In the second phase of the study a case-control comparison was adopted to identify the risk factors for attitude towards violence.

Tool: The tool used in the first phase of the study was based on Likert's four point attitude scale, designed by the investigators after item analysis. The responses were "Strongly agree", "Agree", 'Disagree' and "Strongly disagree". The questionnaire consisted of 27 items, which spread across five domains: i.e, beliefs about aggression, attitude towards inter-personal peer violence, perception of violence, attitude towards aggressive fantasies and attitude towards carrying weapons.

The second phase of investigation was done to identify the risk factors, utilizing a closed ended questionnaire with 'Yes/No' response. It consisted of 36 questions from the domains family atmosphere, class room environment, personality factors, influence of gangs and preference for television shows involving violence.

Sample size and sampling technique: The sample size selected was 1798. The sampling technique adopted was randomized cluster sampling.

Inclusion criteria: High school students of age group 13-15years. Students from two divisions of each school, total of 20 schools of Trivandrum Corporation.

Data analysis: Using SPSS package employing independent t test, ANOVA, multiple logistic regression analysis etc.

Results: Among the participants of the study 63.5% were males the rest were females.21.1% were of 13 years of age, 43.9% were of age 14tyears and the rest were of 15 years of age. Among the participants, 25.3% showed low level of attitude towards violence, 61.5% showed medium attitude and 13.2% showed high attitude towards violence.

Table 1 shows the distribution of participants according to the severity of risk factors. It was observed that 9.5% of participants were from high risk family atmosphere. 16.1 % were from high risk class room environment. It was also noted that 62.5% participants were under the influence of gangs. 13.1 % participants had high risk personality factors.4.1% of the participants were influenced by violent television shows.

Table: 1. Distribution of participants according to the severity of risk factors.

Risk factors	Low		High	
	Frequency	Percent	Frequency	Percent
Family atmosphere	1627	90.5	171	9.5
Class room environment	1509	83.9	289	16.1
Attitude towards gang influence	674	37.5	1124	62.5
Personality factors	1563	86.9	235	13.1
Preference towards television shows	1724	95.9	74	4.1

The comparison of attitude towards violence from high risk and low risk family environment reveals that family atmosphere significantly influence the subject's attitude towards violence (t=13.68, p<0.01) (Table 2). It was also observed that class room environment (t=8.76), influence of gangs (t=4.09) , personality factors (t=14.54) as well as preference for violent television shows (t=11.77) also shows significant influence (p<0.01) on the attitude of the students towards violence.

Table 2: Comparison of attitude towards violence based on risk factors identified.

Attribute	Low			High			t Value
	Mean	SD	N	Mean	SD	N	
Family atmosphere	50.7	10.6	1627	62.7	13.4	171	13.68**
Class room environment	50.8	10.9	1509	57.1	12.7	289	8.76**
Influence of gangs	50.4	10.7	674	52.7	11.8	1124	4.09**
Personality factors	50.4	10.6	1563	61.4	12.4	235	14.54**
Violent tv shows	51.2	10.8	1724	66.6	15.4	74	11.77**
** Significant, p<0.01.							

To find out the independent predictors of the risk factors of the attitude towards violence, the high attitude towards violence was taken as a dependent variable and the risk factors such as family atmosphere, class room environment, and influence of gangs, personality factors and preference for violent television shows were taken as the independent variables. Odds ratio revealed that the probability to have high attitude towards violence was 3 times higher among students from high risk family atmosphere, than students from low risk family atmosphere.

Similarly, the probability to have high attitude towards violence was 1.61 times higher among students from high risk class room environment, than those from the low risk environment.

The influence of gangs showed 1.99 times more probability to have high attitude, while personality factors showed 3.76 times probability. Preference of violent television shows influence 4.24 times of higher probability to have high attitude towards violence.(Table 3)

Table 3: Independent risk factors of attitude towards violence

		B	Std. Error	P	Odds (95 % CI)
Family atmosphere (Low ®)	High	1.10	0.20	0.000	3.00 (2.01 – 4.48)
Class room environment (Low ®)	High	0.48	0.18	0.009	1.61 (1.12 – 2.32)
Attitude towards gang influence (Low ®)	High	0.69	0.17	0.000	1.99 (1.43 – 2.77)
Personality factors (Low ®)	High	1.32	0.18	0.000	3.76 (2.65 – 5.31)
Preference towards television shows (Low ®)	High	1.45	0.29	0.000	4.24 (2.40 – 7.49)

CONCLUSION

The incidence of violence has a worldwide occurrence and is multi faced and multi dimensional. It takes many forms like communal riots, sexual abuse, physical assault, mental or emotional abuse etc. Some people may respond to stressful situations by violent behavior. Violence is not always caused by stress, but may be one way that some people respond to stress. Many factors are identified to have influence on the development of violent behavior in children. The ecological model for family violence [12] suggests that factors like age, income, personality disorders, drug abuse, previous history of experiencing violence,[13] relationship with family and friends , and environment to which the individual is exposed to can influence the attitude towards violence.

Violence can be prevented. Proper identification of various risk factors that influence the perception and attitude towards violence is important in violence prevention. Our study was aimed to explore and identify some risk factors which influence the attitude of high school children towards violence. We identified five risk factors viz. family atmosphere, class room environment, exposure to violent television shows, personality factors as well as influence of gangs has significant influence on the attitude of high school children to violence.

Acknowledgement: The researchers thank the following officials/ offices for helping the conduct of this study.

1. Director of public Instruction, government of Kerala, Thiruvananthapuram,

2. The management of various schools in which the study was conducted,

3. Department of Psychology, University of Kerala, Thiruvananthapuram

4. Department of Community Medicine, government Medical College, Thiruvananthapuram.

Conflict of Interests: Nil

Source of Funding: Self funded.

REFERENCES

1. Understanding school violence. Fact sheet 2015. National Centre for Injury Prevention and Control, Division of Violence Prevention, 2015: 1-3.[internet].Available from: http://www.cdc.gov/violence prevention/pdf/school_violence_fact_sheet-a.pdf.
2. World report on violence and health: summary.[Internet].Available from: www.who.int/ violence injury_ prevention /violence/summary_en.pdf
3. Domestic Violence in India: A Summary Report of Three Studies. International centre for research on women. Washington, DC. September 1999; 1-50.
4. World report on violence against children. UNICEF, Published by the United Nations Secretary General's Study on Violence against children. United Nations Publishing Services (UN Geneva). 2006; 99 pages [Internet]. Available from: http://www.unicef.org/violencestudy/.
5. Trends in adolescent violence. Indian journal of Adolescent Med. Health 2003:15:285-287
6. Rummel RJ. Death by Government: Genocide and mass murder since 1900. New Brunswick. London. Transaction Publications, 1994
7. World report on violence and health: Summary. World Health Organization, Geneva, 2002: 22.
8. WHO Library Cataloguing-in-Publication Data: violence prevention: the evidence: Preventing violence by developing life skills in children and adolescents. WHO, Geneva, 2009. Available through internet from: http://www.who.int/violence_injury_prevention/violence/life_skills.pdf
9. Elliott DS. Youth Violence: An Overview. Center for the Study and Prevention of Violence, Institute of Behavioural Science. University of Colorado, Boulder. March 1994; 1-9
10. Interpersonal violence, aggression and antisocial behaviors in adolescents. Indian Journal of Pediatrics 1999; 66: 589 – 602
11. Gender differences in juvenile violence Journal of Adolescent Health.2003: 32: 234-246
12. Reilly JM, Gravdal JA. An ecological model for family violence prevention across the life cycle. Family Medicine, 2012 May; 44(5):332-5.
13. Munni R, Malhi P. Adolescent violence exposure, gender issues and impact. Indian pediatrics. July 2006; 43:607-12.

DOI Number: 10.5958/0974-9357.2016.00103.3

Effectiveness of Video Assisted Teaching Programme on Epilepsy in Children among the Primary School Teachers in the Selected Schools of Udupi District

Pillai Nisha Balakrishna[1], Anjalin D'souza[2], Nidhin Thomas[3]

[1]M.Sc (Nursing), Manipal College of Nursing, [2]Assistant Professor, Department of Child Health Nursing, Manipal College of Nursing, Manipal University, Manipal, Karnataka, India, [3]DM WIMS Nursing College, Wayanad, Kerala

ABSTRACT

Objective: Primary school teacher's knowledge and attitude toward epilepsycan have significant impact on the performance and psycho-social development of the child with epilepsy. The objectives of the study were to evaluate the effectiveness of video assisted teaching programme on knowledge and attitude regarding epilepsy in children among primary school teachers of Udupi district.

Materials and method: Study adopted an evaluative approach with one group pretest posttest design. The study was conducted in the government primary schools of Udupi District . A total of 55 teachers were selected by cluster sampling technique.

Results: The results revealed that only 8(13.60%) of the primary school teachers had good knowledge on epilepsy in children before the intervention whereas majority 54(98.20%) had good knowledge in the posttest. Before the intervention 9 (16.40%) of primary school teachers had negative attitude whereas after the intervention all 55(100%) had a positive attitude towards children with epilepsy. There was a significant difference in pretest and posttest knowledge scores (t=14.36) and attitude scores (z=6.489).

Conclusion: Therefore the study concludes that the video assisted teaching programme was effective to improve knowledge and change the attitude of primary school teachers.

Keywords: *video assisted teaching programme, knowledge on epilepsy, attitude towards epilepsy*

INTRODUCTION

Epilepsy is a disorder characterized by recurrent seizures of cerebral origin, presenting with episodes of sensory, motor or autonomic phenomenon with or without loss of consciousness. Epilepsy is the second most common chronic neurological condition seen by neurologists[1]. According to WHO bulletin 2010, there is global disparity of care for persons with epilepsy between low and high income countries. Globally the incidence rate of epilepsy is 50 million with prevalence rate of 0.7% in which 80% are from developing countries.

The limited data show that the incidence and prevalence rates of epilepsy in India are surprisingly similar to those in developed countries. A study conducted in Kolkata's urban population showed an annual incidence rate of 27.27 per 100,000 per year.[2] A recent rural epilepsy surveillance program from Uttarakhand showed a prevalence rate of two or more unprovoked seizures to be 7.5 per 1000.[3] This is slightly higher than the prevalence rate in Kerala, a state with higher literacy rates and better public health awareness (4.9/1000).[4] A pediatric study from Kashmir valley shows prevalence rates of 3.74/1000 in

Corresponding author:
Anjalin D'souza,
Assistant Professor, Department of Child Health Nursing, Manipal College of Nursing, Manipal University, Manipal, Karnataka, India
Email id:anjeline.d@manipal.edu

males and 3.13/1000 in females.[5]

Teachers are the one who are always with the children during their school hours. A teacher should have basic knowledge regarding the first aid management so that she can manage the child with epileptic attack during school hours. It is also important that a school teacher should have positive attitude toward children with epilepsy so that she can help such children to have normal lifestyle like other children. Moreover she can impart the same attitude to the students also.

A study was conducted to assess the awareness, attitude and understanding of epilepsy among primary school teachers in Medan, Indonesia. A total of 84 teachers were selected for the study. Self-administered questionnaire were administered to these teachers. The results inferred that teachers had negative attitude and misconceptions towards epilepsy. [6]

Teachers usually do not have any formal instructions on epilepsy during their training, so they should be correctly informed about the disorder and encouraged to have a positive and optimistic attitude toward the condition. Other children may be quite helpful if they are aware that the seizure is benign. They should be motivated to offer help and pass on information on epileptic care to their family and friends. Despite the significant impact of teacher's role in the lives of these children, very little research has been conducted in India to address these issues.

The objective of the current study was to assess the primary school teacher's knowledge and attitude regarding epilepsy in children. We also aim to evaluate effectiveness of video assisted teaching programme on knowledge and attitude regarding epilepsy among primary school teachers of Udupi district.

MATERIALS & METHOD

The present study was conducted in the selected government primary schools of Udupi district. A quasi experimental design with one group pretest posttest design was used for the study. The samples were the primary school teachers of Udupi disrtict. Udupi district has got five blocks namely Kundapura, Udupi, Byndoor, Brahmavara and Karkala. Udupi block was conveniently selected from these five blocks. Eleven government primary schools were selected by Simple random technique. A total of 55 teachers were selected by using cluster sampling technique.

For collecting the data three tools were developed by the researcher. Demographic proforma was developed to collect background information of the teachers and comprises of 8 items. A knowledge questionnaire regarding epilepsy consists of 30 multiple choice questions. Each correct answer was given a score of one and wrong answer zero. To ensure content validity, the tool was given to six experts from the field of pediatric medicine, child health nursing and community health nursing. A score of less than 10 was considered as poor knowledge, 11 to 20 average knowledge and 21 to 30 as good knowledge. Reliability of knowledge questionnaire was calculated by spit half method and the value was 0.89

Attitude scale towards epilepsy: A four point likert scale with 20 items was developed to examine the attitude on epilepsy with response categories of strongly agree, agree, disagree and strongly disagree. A score of 20 to 49 was considered as negative attitude and a score of 50-80 as positive attitude. To ensure content validity the tool was given to six experts from the field of pediatric medicine, child health nursing and community health nursing. The reliability of attitude scale was done by using Cronbach's alpha and was 0.75.

Video assisted teaching programme on epilepsy in children was developed by the researcher. A 10 minutes video covered the content on causes, clinical features, treatment, side effect of drugs, first aid for seizures and teacher's role in care of a child with epilepsy. A pilot study was done among 10 primary school teachers to determine the feasibility of the study.

Data was collected from the school teachers after obtaining permission from principals of selected schools and institutional ethics committee. The nature of the study and questionnaire were explained to all school teachers who agreed to participate in the study. Informed consent was obtained from all participants. On day one background information, knowledge and attitude regarding epilepsy was collected and

on the same day video assisted teaching programme was given to school teachers. On 7th day posttest was carried out by using same tools. Data was analyzed based on the objectives of the study using descriptive and inferential statistics at 0.05 level of significance.

FINDINGS

Table 1: Distribution of sample characteristics in frequency and percentage (n=55)

Sample characteristics	Frequency	Percen-tage (%)
Age		
21-35	10	18.2
36-51	21	38.2
52-67	24	43.6
Educational status		
PUC	29	52.7
Graduate	20	36.4
Post graduate	6	10.9
Knowledge on epilepsy		
Yes	47	85.5
No	8	14.5
Knowledge on first aid		
Yes	39	70.9
No	16	29.1
Previous experience of managing children with epilepsy		
Yes	18	32.7
No	37	67.3

The study results inferred that majority of teachers 24(43.6%) belonged to age group 52-67 and majority of them 29(52.7%) were having PUC education. With regard to knowledge on epilepsy 8(14.5%) of them were not aware of epilepsy in children. Most of the teachers 37(67.3%) did not have any previous experience of managing children with epilepsy.

Table 2 : Mean standard deviation, mean difference and t value of pretest and posttest knowledge scores. (n=55)

Know-ledge scores	Mean	SD	Mean diffe-rence	SD diffe-rence	t	p value
pretest	18.52	2.32	3.87	2.00	14.29	0.01
posttest	22.40	1.21				

During pretest only 8(23.60%) had good knowledge whereas in the post test majority 54(98.20%) had good knowledge. The data followed normality therefore parametric test, paired *t* test was used to analyze the statistical difference . The obtained' value is 14.29 for knowledge which is significant at 0.05 level as shown in table 2. It is inferred that the video assisted teaching programme was an effective method to increase the level of knowledge among the primary school teacher's.

Table 3: Median, inter quartile range, and Z value of pretest and posttest attitude scores (n=55)

Attitude scores	Median	Inter quartile range (IQR)	Z Value	p value
Pretest	60	(56,62)	6.489	0.001
Posttest	62	(59,65)		

Before the intervention 9(16.40%) of primary school teachers had negative attitude whereas after the intervention all 55(100%) had a positive attitude towards children with epilepsy. The data did not followed normality therefore non parametric test, Wilcoxon sign rank test was used to compute the data. The obtained 'z' value is 6.489 and 'p' value was 0.001 as shown in table 2, which indicates that there is a significant difference in the pretest and posttest attitude scores.

DISCUSSION

The present study revealed that there was a significant increase in the posttest mean score (22.40) compared to the pretest mean (18.52). These signify that knowledge of primary school teacher's improved after the video assisted teaching programme. The study also showed that that there was significant difference in the attitude scores after the intervention.

These results are supported by a study on effect of health educational program on knowledge about epilepsy and its management among primary schools' teachers at Egypt. The findings revealed that there was an improvement in teacher's knowledge and their management regarding epilepsy from pre to where the mean percent change of improvement was 55.46 ± 130.27 and 56.05 ± 135.40.[7]

The findings are similar with an interventional study conducted to assess the effect of structured teaching programme on knowledge regarding epilepsy in children among 50 school teachers.

The study was conducted at Bangalore and the teachers were selected by simple random sampling. The results revealed that mean posttest score 36.10 was higher than the mean pretest score 25.38. The computed, t " value 23.321, indicated that there was a significant difference between pretest and posttest knowledge score. [8]

The present study was done among 55 school teachers, less sample size which limits the generalization of the findings, also study used only an interventional group, and control group was not included.

CONCLUSION

The study findings revealed that the teachers have moderate knowledge and positive attitude regarding epilepsy in children. It was found that there is lack of knowledge for the teachers regarding epilepsy in children. Video assisted program would help the teachers to update with necessary knowledge with regards to the causes, prevention, and management and also to change their attitude towards children with epilepsy. There was a marked increase in posttest knowledge and attitude score than pretest knowledge and attitude score which explains the effectiveness of video assisted teaching program. Thus teachers should be encouraged to enhance their knowledge regarding epilepsy in children for proper care, support and timely management to prevent complication.

Conflict of Interest –Nil

Source of Funding –Nil

Ethical Clearance – obtained from IEC.

Acknowledgement-Nil

REFERENCES

1. Sridharan R. Epidemiology of epilepsy.Current Science.2002; VOL. 82, NO. 6, (retrieved from http://www.iisc.ernet.in/~currsci/mar252002/664.pdf)
2. Banerjee TK, Ray BK, Das SK, Hazra A, Ghosal MK, Chaudhuri A, et al. A longitudinal study of epilepsy in Kolkata, India. Epilepsia. 2010;51: 2384–91.
3. Goel D, Agarwal A, Dhanai JS, Semval VD, Mehrotra V, Saxena V, et al. Comprehensive rural epilepsy surveillance programme in Uttarakhand state of India. Neurol India. 2009;57:355–6.
4. Radhakrishnan K, Pandian JD, Santhoshkumar T, Thomas SV, Deetha TD, Sarma PS, et al. Prevalence, knowledge, attitude, and practice of epilepsy in Kerala, South India. Epilepsia. 2000; 41:1027–35.
5. Shah PA, Shapoo SF, Koul RK, Khan MA. Prevalence of epilepsy in school-going children (6-18 years) in Kashmir Valley of North-west India. J Indian Med Assoc. 2009;107:216–8.
6. Rambe SA. Awareness, attitude and understanding towards epilepsy among school teachers in Medan, Indonasia. Neuro J Southeast asia 2002; 77-88.
7. Mohamed MA, Elalem OM. Effect of health educational program on knowledge about epilepsy and its management among primary schools' teachers. International Journal of Advanced Research 2015; Volume 3, Issue 11, 221- 227.
8. Sharma NK, Prasanna KL, Kumar A. Effectiveness of Structured Teaching Program on Knowledge Regarding Epilepsy in Children among school teachers. Journal of Nursing and Health Science (IOSR-JNHS) 2013; 2320–1940 Volume 2, Issue 6 , PP 07-13.

DOI Number: 10.5958/0974-9357.2016.00104.5

OSCE -an Evolution in Evaluation

Sandeep Raju

Asst. Professor, Theerthankar Mahaveer University, Moradabad, UP

ABSTRACT

The educational system of India is composed of a vivid array of teaching and evaluation methods depending on the Boards or universities under the educational programs are conducted. Preferably there is numerous ways of teaching assessing and evaluating the quality as well as the progress of students.

When we consider the standardization of particular courses in nationwide manner this vivid array of educational system of India become complex. The local bureaucracy and availability of resources for the errorless conduction of courses under the given regimen always have influenced the evaluation and assessment.

As in the case of professional education system, the quality and competencies should match through all institutions across the country, as it should be globally.

Keywords: *OSCE, education*

PROFESSIONAL EDUCATION SYSTEM

The evaluation of professional education consists of both practical and theoretical exam but traditional methods of education and evaluation doesn't offer a clear view on the professional education instead it does gives a perspective of theoretical side of professional education rather than the practice, in most cases the students lacks the practical knowledge and many times fails in the real world scenarios or they need a large sum of time to adjust in the industrial area of their work which is dynamic with technological changes in real time.

THE CHALLENGES WE FACE

The nursing education is none different than any other professional discipline. For that we have students from various socio-economic backgrounds, also differs in medium of communication, they taught by educators from different socio-economic and cultural backgrounds with different medium of communication, trained in different institutions and Board and Universities and went through different methods of teaching and evaluation based on the institution, faculties and the state/board/university which is responsible of conducting and evaluating the nursing education.[10]

Although syllabus and scheme of examination are same and implemented in the supervision of INC but the extend of implementation and the method of evaluation is not the same across different states. For example the theoretical examination of AndraPradesh is based on essay type questions where as Karnataka it is composed of one-mark questions as well as essay and short answerers. Students studying same syllabus.

Preparing for different types of evaluation methods develops different types of skill set, to produce score in that system of evaluation, it results in professionals different in approach and perspective to that profession.

So the question of nationalized standardization arises, it is one of the greatest of concern and main objective of INC's common syllabus across the

Corresponding author:
Sandeep K Raju
Assistant Professor, Teerthanker Mahaveer College of Nursing, Teerthanker Mahaveer University, Moradabad. E-mail sandeeprajuanchal@gmail.com
Cont. No. 8439417521

country from the day the agency is came into action.

PROFESSIONAL EDUCATION: - THEORY VS PRACTICE

As in the case of nursing the theoretical bases is build up by the tutors in classrooms are almost keep up with the criteria of INC about teaching. Evaluation is also independent and comprehensive in classroom settings. Practical education is also provided by various institutions are also as per the guide lines enables the individual student nurses to a level of independency in nursing procedure.

As the time wheel is revolving Art and Science of Nursing is also evolving the standards of practice of nursing changes per the technological competencies methods of health care

Management changes, a student with good practical and theoretical base in his/her curriculum will also face the challenge to cope up with the current trends and practice as they introduced to real world hospital environment because of lack of technical competencies the profession requires.

Current day the gap is filled by in service education and various training programs run across the country inclusive of skill development and certifications too.

NEED FOR AN UPDATED EVALUATION SCHEME

For an effective standardization nationwide requires a lot of time and energy. Deployment of In-service education programs also needs Physical as well as human resources to ensure the effectiveness of such programs. In most scenarios training of total number of Health care workers (say Nurses) is not possible or lease implemented. Especially for the private sector. Because in private sector position and staffing is always changing. So nobody can't expect the Post-Course trainings will be as effective as in government sector.

The assessment of the staff who has not received the training is fairly impossible. Most hospital settings the quality of service is not assessed due to the lack of personals or health care workers with desired set of skills in many cases there may be absence of a system to assess the quality of care delivered. Even though superintends of them had received Training programs. The preseason is to this incident is the lack of health care personals per patient. It also results in the compromised delivery of health care service.

As the scenarios discriminate the benefits of post-course training programs are somehow limited. If we want a change in both aspects of quality and quantity we have to accept ourselves the inefficiency of current system of assessment and evaluation and prepare for a change in the traditional system of education.[10]

"Deployment of In-service education programs also needs Physical as well as human resources to ensure the effectiveness of such programs"

CHANGES IN THE AIR

Government of India launched National Rural Health Mission (NRHM) to bring improvements in the health care system and Health status of people. Thereafter INC and NRHM together working in co-operation with one another to transform the Health care Sector of India.. After the integration of management of neonatal and childhood illness (IMNCI) several meetings with stakeholders for "strengthening pre service nursing and midwifery education" held under the chairpersonship of Additional secretary & Management Director, NRHM. During the meetings, it was decided to implement the revised syllabus and competency based certification with internship. To meet the above purpose, INC has developed for preparation and conduction of Objective Structured Clinical Examination (OSCE).

IMPLEMENTING OSCE

WHAT IS OSCE?

The Objective Structured Clinical Examination consists of a new method for assessment which not only evaluate the knowledge acquired during the education but it involves an assessment of broad sample of knowledge and skills that demonstrate application of knowledge in various clinical situation and can provide a reliable and valid assessment by rapid scoring and decision making during the examination. [3]

During OSCE students rotate through a series of 10-20 stations (a set up of particular conditions demonstrated for the student to conduct and

perform suitable nursing skills for that particular condition).where they need to answer the questions of multiple evaluators and perform tasks, demonstrate different skills, interpret diagnostic materials, or respond to short questions or case studies while being observed.

The OSCE station usually targets the identified competencies as per the objectives of training. The Problem or an activity conducted on a station, will address each of the competencies and preparation of a plan for that particular

The objective structured clinical examination, first used in the 1970s, is an assessment of competence carried out in a well-planned, structured and objective way (Harden and Gleeson, 1979). It is well established within medicine and is used increasingly in nurse education (Nulty et al, 2011).

IMPORTANCE OF OSCE

OSCE is a time bounded practical skill test, in which candidate have to perform the skills within 5-10 min allowed to them in each station while being observed by an examiner/observer with a check list to record the score. The students should respond to the questions of each invigilator orally or written. All candidates will receive the identical assessments in each station so that assessment may conduct uniformly.

The checklists ensure that all students are assessed by the same standards. It also allows students to communicate with standardized patients via role-plays.

OSCE is more focused to improvement of student thane the pass-fail criteria of old scheme of examination. Before the examination examiners/ observers should discuss about the number of OSCE stations and OSCE round with the student, clear any doubts and gave them a proper orientation to what they are going to face. During the examination examiners should not make any kinds of interference, which may refrain the candidates to perform their skills. Only give them feedback after the completion of all stations review the performance and give them positive feedback along with suggestions for improvement, after that examiner determines the student is competent or needs additional practice, and gave students opportunity to ask questions about the steps they missed. If too many students struggle with same stations also means the teaching method or materials did not adequately cover that learning objective. So OSCE is not only assessing the students' skill but also it is an assessment of the learning methods. As a result the formative assessment done through the OSCE is focused to improve the quality of professionals evolved through the educational process along with the quality of educational system consisting of educators, invigilators and evaluators.

Student preparation for OSCE

Preparation is vital and increases students' confidence in performing skills during the OSCE and in clinical areas (Street and Hamilton, 2010). Formative or mock OSCEs also increase confidence and competence (Alinier, 2003).

Students preparing for an OSCE should:

- Be psychologically prepared;
- Be familiar with how equipment works;
- Know which procedures/guidelines are to be used in the OSCE;
- Be familiar with checklist/marking criteria;
- Rehearse skills;
- Know the timing of the OSCE;
- Develop skills on clinical placement;
- Revise the underpinning theory of skills;
- Use feedback from mock/formative OSCEs;
- Use available resources such as guided study, quizzes and videos;
- Check whether they should wear uniforms;
- Confirm the date, time, venue and allow enough time to get there;
- Practise answering questions verbally.

Marking OSCEs

- A checklist is frequently used to mark OSCEs to increase the objectivity and reliability of the assessment, especially when several assessors are required. This consists of the skill broken down into steps, which are marked using a binary rating ("achieved" or "not achieved"). Tables 1 and 2 contain samples of checklists from a year 1 (level 4) pre-registration nursing OSCE.

- The complete OSCE assesses professional behaviour, communication, consent, handwashing, temperature, pulse, respiratory rate and manual blood pressure. Two lecturers are present, one as the patient (unless an actor is used) and one leading the assessment, with both contributing towards the final mark. The student stays in the same room and performs the skills in any order, but must cleanse their hands before and after contact with the patient.

- A global rating scale can be used in combination with a checklist or on its own (Rushforth, 2007). The scale allows the overall quality of the student's performance to be assessed by an experienced and knowledgeable assessor (Rushforth, 2007). An example of a global rating score involves the assessor identifying the level of the skill performance across the range "excellent/good/satisfactory/ borderline pass/borderline fail/fail". A Likert scale of "pass-borderline-fail" can be used by the assessor to judge a student's performance.

- The assessor must have a sound understanding of the assessment and the marking tool.

ROLES AND RESPONSIBILITIES OF SNRC IN CONDUCTING THEORY EXAMINATION

OSCE is first implemented on the ANM syllabus in selected states under the state nurse registration councils (SNRC). SNRCs of each states holds responsibility for conducting the theory examination based on the blue print according to OSCE criteria and prepare the question banks for each subject.

These question papers reviewed periodically to determine objectivity, reliability, fairness and adherence to the course objectives. The front page contains general instructions, number and type of questions and other relevant information to help the candidate for a better performance. The questions are aimed to assess not only the recall ability but also application and analysis abilities of student.

The question paper must contain at least two types of question formats out of the following formats.ie, multiple choice questions, true/false questions, matching questions, short answer questions and essay question. The instructions and score for each section must be clearly stated.

Answer keys are prepared before the examination and followed at the time of evaluation this will help to maintain the objectivity. The distribution of marks for different question types are, Objective type questions is 15 marks in total and short answer question will be 30 marks in total and essay questions is of 30 marks

ROLES AND RESPONSIBILITIES OF SNRC IN CONDUCTING PRACTICAL EXAMINATION

SNRC holds responsibilities to inform the AMTC about the application of OSCE over conventional methods of practical examination on preferred subjects decided by the INC. The registrars/ examination boards ensure the teachers and staff receives orientation in practicing OSCE methods of evaluation in formative assessment and to prepare and conduct OSCE in state level.

The preparation of OSCE on practical examination starts from creating OSCE examiners/assessors Pool of B.Sc. Nursing Teachers with 2 years of experience at state level. SNRC needs to plan for the examination of 24 students per day accordingly in each OCSE venues, and appoint one examination superintendent to arrange logistics and smooth conduction of OSCE.

Supply of stationeries is necessary for uninterested execution of competency-based examination. SNRC prepares OSCE checklist envelops for each practical exam for all OSCE skills lab for 12 days, separately. It should be opened and used only on the day by the examination superintendent.

OSCE AND NURSING CURRICULUM OF ANM:-

ANMs in our country mostly serve at the contact points of public health care system and distant communities. Where they have to be the leaders of Health care team, and they need theoretical foundation along with the technical competencies for the special tasks they have to carry out in the PHCs and CHCs at far ends of community. To ensure this, New Revised Syllabus is introduced, which aims to develop a set of skills and technical competencies to improve the quality of front-line of national health care sector. To strengthen the new syllabus, OSCE has been implemented to assess the theoretical foundation and reasoning ability in competence with skills required in their area of profession. OSCE

provides a highly structured and reliable method for assessment.

With various training programs for teachers at ANMTCs to develop their teaching skills to focus on clinical training and practice of necessary skill sets. OSCE provides a whole new set of regulations applied to the current schema of examination in both practical and theoretical examinations provides educators and students precise directions for teaching and learning. This results into more object oriented training thus to bring out high quality professionals with unified standards of practice

The assessment of students conducted in a unified way in nationwide ensures the implementation of uniform standards of assessment and clinical practice across the country. It also prepares them with effective practice in delivering services at the community and clinical settings throughout their study and after.

CONCLUSION

The revised curriculum aims to develop a set of skills and technical competence to improve the quality of front line of national health care, OSCE is first implemented to ANM course as the ANM delivers care at PHCs and CHCs along country for women and new born, at many times where they have to be leaders of health team (in community settings as well as in Primary Health Centres) and always needs technical competency along with theoretical base and reasoning ability, criteria of Revised ANM curriculum is to provide them with essential skills and techniques which help them to deliver a high quality of care. Traditional methods of evaluation do ensure theoretical understanding and ability for reasoning but doesn't fit for a clear demonstration of practical skills.

Acknowledgement: I wish to acknowledge Mrs. krishnaveni Murugesh for his dedication in mentoring and encouraging me to prepare this article.

Ethical Clearance: None

Sources of Funding: Self

Conflict of Interest: None

REFERENCE

1. Alinier G (2003) Nursing students' and lecturers' perspectives of objective structured clinical examination incorporating simulation. Nurse Education Today; 23: 6, 419-426.
2. Barry M et al (2012) An exploration of student midwives' experiences of the Objective Structured Clinical Examination assessment process. Nurse Education Today; 32: 6, 690-694.
3. Harden RM (1990) Twelve tips for organising an OSCE. Medical Teacher; 12: (3-4) 259-264.
4. Watson R et al (2002) Clinical competence assessment in nursing: a systematic review of the literature. Journal of Advanced Nursing; 39: 5, 421-431.
5. Beckham N (2013) Objective structured clinical evaluation effectiveness in clinical evaluation for family nurse practitioner students. Clinical Simulation in Nursing; 9: 10, e453-e459.
6. Brosnan M et al (2006) Implementing objective structured clinical skills evaluation (OSCE) in nurse education programmes in a centre in Ireland: a utilisation focused evaluation. Nurse Education Today; 26: 2, 115-122.
7. Byrne E, Smyth S (2008) Lecturers' experience and perspectives of using an objective structured clinical examination. Nurse Education in Practice; 8: 4, 283-289.
8. Nulty D et al (2011) Best practice guidelines for use of OSCEs: maximising value for student learning. Nurse Education Today; 31: 2, 145-151.
9. Nursing and Midwifery Council (2010) Standards for Pre-registration Nursing Education. London: NMC.
10. Workshop: Attended workshop on OSCE/OSPE -ICMR SPONCERED WORKSHOP ON OSCE FOR HEALTH CARE PROFESSIONALS HELD in PAL college of nursing, Nainithal.

DOI Number: 10.5958/0974-9357.2016.00105.7

A Descriptive Study to Assess the Level of Knowledge Regarding Selfie as a Mental Disorder among Students of Selected Educational Institution in Jalandhar, Punjab, 2015

Anantdeep Kaur[1], Anu Bala[1], Chanpreet Kaur[1], Gurnoor Bajwa[1], Harpreet Kaur[1], Kalapjit Kaur[1], Kishanth Olive[2]

[1] BSc 4th Year Psychiatric group, [2] Assistant Professor, Department of Psychiatric Nursing, S.G.L. Nursing College, Semi, Jalandhar, Punjab

ABSTRACT

Background of the study: Selfie means "taking picture of oneself ". Now –a-days it is very common among young girls and boys. "American nursing association" categorized Selfie under the mental disorder .Knowledge about "Selife as a mental disorder" is essential for awareness of young adults.but people has less knowledge about Selfie as a Mental Disorder. So, there is a need to assess the knowledge of young boys and girls regarding "Selfie as a Mental Disorder".

Objective:

1. To assess the demographic variables regarding Selfie as a Mental Disorder.
2. To assess level of knowledge regarding Selfie as a Mental Disorder.
3. To find out association of demographic variable with level of knowledge regarding Selfie as a Mental Disorder

Methodology:

Research Design: Non – Experimental Descriptive research design.

Setting: Selected educational institution of district Jalandhar, Punjab.

Target population: Students of selected educational institution, district Jalandhar, Punjab.

Sample Size: 100 students

Sampling Technique: Convenient sampling technique

Result and Conclusion: The finding of the study revealed that 78% of the samples had moderate knowledge, 2% samples had poor knowledge and 20% samples had adequate knowledge. The study was found associated with socio-demographic variables like age, educational level, occupation. Hence, it is conclude that most of the students have moderate knowledge regarding "Selfie as a Mental Disorder".

***Keywords**: "Knowledge" Selfie as a Mental Disorder "students" "selected" "educational institution".*

INTRODUCTION

The term „Selfie" or „Selfy" is defined as a "a photograph that one has taken of oneself, typically with a smart phone or webcam and uploaded to a social media website". According to **Dr. Robyn Silverman** it is matter of adolescent and teens constantly trying to define themselves. They crave positive feedback to help them see how their identity fits into their world.social media offers an oppourtunity to garner immediate information. The problem is they are looking in a dangerous place. Selfie is a self portrait photograph typically taken with a hand held digital camera or camera phone . The growing trend of taking samrtphone selfies is linked mental health conditions that focus on a persons obsession with looks. According to **Dr. David**

Veal, Selfies are not a harmless or they seem. **Veal**, along with physician and psychologist, warns that people who takes a lot of self portraits-"Selfies" with their phones or other mobile devices are at increased risk of various types of mental illness, including to(BPD),OCD and others.[1]

There are many types of Selfie. Each type of Selfie shows different effect on a person. In this the person shows very strange behavior and in some cases it lead to life threatening condition.[2]Psychologist have reported that since the rise of Selfies repeated self portrait have become a common symptom of people with both BPD and OCD. They use social media to seek attention and approval through post's . This can be dangerous if it gets out of hand, could cause other issues such as depression or anxiety if people in the internet make negative comments.[3] Selfie leads to many complications like suicidal attemptation and commitment, which leads to serious harm to life and also the social isolation with preoccupied mind with random thoughts of being impressive on social media.[4]

MATERIALS & METHOD

This study was conducted in students in selected schools and colleges of district Jalandhar, Punjab, India. Descriptive study (pre-test only design) was adopted and a total of 100 students were selected for the study by convenient sampling technique, who met the inclusion criteria. Structured knowledge questionnaire was used to assess the knowledge of students regarding selfie as a mental disorder.

RESULTS

The first objective revealed that majority 73(73.0%) students belonged to age group between 15-20 years; 69(69.0%) were male whereas 31(31.0%) were female; in relation to religion, majority 56(56.0%) samples belonged to Hindu religion; in relation to residence majority 71(71.0%) samples belonged to urban area; in relation to parents education, majority 36(36.0%) were graduate and above; in relation to educational stream, majority 61.0%) samples from other streams; in relation to educational level, majority 41(41.0%) samples were upto under graduate; in relation to parents occupation, 51(51.0%) samples belonged to skilled and 49(49.0%) samples belongs to unskilled occupation; in relation to parents occupation, 51(51.0%) samples belonged to skilled and 49(49.0%) samples belongs to unskilled occupation; in relation to family income, majority 36(36.0%) samples had income Rs30,001 and above and in relation to support system regarding Selfie, majority of samples 58(58.0%) were supported by peer-group/friends.

The second objective revealed that majority (78%) samples had moderate knowledge, 20% samples had adequate knowledge and 2% samples had poor knowledge regarding Selfie as a Mental Disorder.

The third objective revealed that education and family income had significant association with knowledge of students.

DISCUSSION

The first objective was To assess the demographic variables related to Selfie as a Mental Disorder .The findings of the present study revealed that men (69%) of high socio economic status were more prone to take Selfies than women (31%) or the people of low socio economic status.

The findings of the study are supported by a study conducted by **Jesse Fox (2015)** ,assistant professor of communication at Ohio State University ,who conducted the online survey which shows 800 men between 18-40 years old had higher level of narcissism and higher level of psychopathy related to Selfie as a Mental Disorder.[5]

The second objective was To assess the level of knowledge regarding Selfie as a Mental Disorder. The findings of the present study revealed that the majority of (78%) samples had moderate knowledge, (20%) samples had good knowledge and (2%) samples had below average knowledge.

The findings of this study are supported by the first national survey of knowledge and attitude towards Mental Disorders (2014) which shows that majority of people (61%) had inadequate knowledge, (33%) people had adequate knowledge and (18%) had below average knowledge.[6]

The third objective was To find out association of demographic variables with the level of knowledge regarding Selfie as a Mental Disorder. The findings of the present study revealed that, educational status and income were found significant .Other

demographic variables were non-significant.

The findings of the study are supported by the study conducted in **Otto Wahl and Zatina University of Hartford(2014)** which stated that there was a significant association between knowledge score and selected socio demographic variables such as educational status.[7]

Acknowledgement: We students of B.Sc. 4th Year Ms. Kirandeep Kaur, Mrs. Manpreet Kaur, Ms. Navdeep Rooprai, Ms. Ramanpreet Kaur, Ms. Ravneet Kaur, Ms. Rimplepreet Kaur want to express our gratitude especially to the Principals of the selected educational institutions of district Jalandhar, who allowed us to conduct study and the subjects those who participated in the study. We also want to thank our affectionate and adoring Parents, brothers and sister and research ethical committee of S.G.L. Nursing College, Jalandhar, Punjab for their constant support and encouragement.

ETHICAL CONSIDERATIONS

1. Written permission from principal of S.G.L Nursing College Semi, Jalandhar was taken.
2. Written permission from ethical clearance committee of S.G.L Nursing College was taken.
3. Written permission from principals of selected institutes of district, Jalandhar was obtained.
4. Written consent from students who participating in the study was taken.
5. Confidentiality and anonymity of sample maintained throughout the study.

Source of Funding: Self

Conflict of Interest: Nil

REFERENCES

1. http://www.oxfordlearnersdictionaries.com/pronunciation/English/selfie "Robert Cornelius" self portrait:The First Ever "Selfie"(1839).Public Domain Review. Open knowledge Foundation. Retrieved 10 August 2014. Prints and piortrait online catalog.Library of congress.Retrieved 18 December 2013. "Beginners Guide To Understand And Using A Brownie Box Camera". "Diaries and letters –Letters of Grand Duchess Anastasia". "A brief history of the selfie".Abc.net.au.Retrieved 12 December 2014.
2. http://www.oxfordwords blog.com/oxford dictionary/word of the year 2013 Law, Michelle (30 August 2014)."Bad taste slfie cry out for self-censorhip".The Sydney Morning Herald. Retrieved 20 september 2014.
3. Jim Krause, photo idea index,2005. Page 148. Kate losse .The Return of selfie. The New Yorker.5 June 2013.
4. www.google.co.in/search? q= Carolline+Who+Study+on+Selfie&Client=ms-opera-mini-android&channel=nens_rd=cr&ei=13nlVzrTF9WIyAS×qIqAAW.www.scopemed.org/?mnc=45096(Ascess:August 07,2015).
5. http://psychcentral.com/news/2015/01/07/posting-of-selfies-may-suggest-personality-issues/79579.html
6. http://www./knowledge-and-attitude/mental-disorders.
7. http://www.today.com/org.

DOI Number: 10.5958/0974-9357.2016.00106.9

Efficiency of Walking Exercise on Sleep Pattern among Geriatrics- A Dose Response Analysis

Sampoornam W[1], C Soorya[2], G Ranjana[2], C Selvarani[2], A Mathiyazhagan[2], B Anisha[2]

[1]PhD Scholar, Saveetha University, Chennai, [2]BSc(N) IV Year, Dhanvantri College of Nursing, Pallakkapalayam

ABSTRACT

Context: Sleep disorders are fairly common in the elderly. Older individuals tend to experience less deep sleep and wake up frequently in the night, which can lead to daytime fatigue. The elderly may also have trouble falling asleep and may also wake up early in the morning. Sleep disorders in the elderly can be caused by a number of factors, including medication, diseases, and poor sleeping habits. Depending on the cause, there are a number of different treatment options. Walking exercise is one of the best methods to improve the sleep. **Objective:** The present study aimed to assess the effectiveness of walking exercise on sleep pattern among geriatrics. **Method:** True experimental design, where pre and posttest with control group design was used. 40 geriatrics were included in the study. Simple random sampling technique was adopted. A dose response analysis was used. Experimental group was given with walking exercise twice a day for 2 weeks and control group was given with walking exercise twice a day for 1 week. The data was obtained by using a demographic variables and Pittsburgh sleep quality index scale for sleep. **Results:** Findings revealed that the calculated unpared't' test value showed that walking exercise was statistically significant (t=5.75 in experimental group and t=7.86 in control group) on sleep pattern among geriatrics. **Conclusion:** This result demonstrated that experimental group showed more statistical significant effectiveness of walking exercise on sleep pattern compared to control group among geriatrics.

Keywords: *Walking, Exercise, Sleep pattern, Geriatrics, Dose Response Analysis*

INTRODUCTION

Sleep disorders are fairly common in the elderly. Older individuals tend to experience less deep sleep and wake up frequently in the night, which can lead to daytime fatigue. The elderly may also have trouble falling asleep and may also wake up early in the morning. Sleep disorders in the elderly can be caused by a number of factors, including medication, diseases, and poor sleeping habits. Depending on the cause, there are a number of different treatment options [16]. Sleep disorders are commonly under diagnosed and are a significant source of concern in the geriatric population. Several diverse factors may contribute to sleep disturbances in a large percentage of the elderly population, including retirement, health problems, death of spouse/family members, and changes in circadian rhythm. Changes in sleep patterns may be part of the normal aging process; however, many of these disturbances may be related to pathological processes that are not considered a normal part of aging.

The prevalence of insomnia is also higher among older adults. According to National Sleep Foundation's 2003 *Sleep in America* poll, 44% of older persons experience one or more of the nighttime symptoms of insomnia at least a few nights per week or more. Insomnia may be chronic or acute and is often related to an underlying cause such as a medical or psychiatric condition. More than 50% of elderly people have insomnia. Sleep disturbance or insomnia is the third most common patient complaint, ranking behind headaches and the common cold. Approximately 15% of the adult population in the United States has insomnia of significant enough severity to seek medical attention. Older women are more likely to experience insomnia than older men. In a large epidemiologic study of people older than 70 years, 35% of women reported moderate to severe

insomnia, compared to only 13% of men [2].

Chronic sleep disturbance is reported by nearly 50% of the elderly population particularly common in this age group is chronic insomnia, characterized by fragmented sleep and early morning awakening [17]. Studies have found insomnia, defined as the inability to initiate or maintain sleep resulting in daytime consequences, to be the most common sleep disturbance in older adults, with up to 40%–50% of those over the age of 60 reporting disturbed sleep. However, the annual incidence rate is estimated to be 5% in those over the age of 65. Complaints range from difficulty falling asleep, to difficulty with sleep maintenance to frequent nighttime awakenings and early morning awakenings. Gender differences exist as well; with women being more likely to complain about insomnia than men .There are a variety of factors associated with the development of insomnia in the elderly including depression and psychological distress, medical conditions, medications, and circadian rhythm disturbances. Foley et al reported that while 28% of older adults suffered from complaints of chronic insomnia, only 7% of the incident cases of insomnia in the elderly occur in the absence of one of these risk factors [15].

METHOD

The research design selected for the present study was basic true experimental design. The total sample size was 40 geriatrics out of which 20 was in experimental group and 20 in control group. Random sampling technique was adapted by listing the elements, followed by random table number the samples were either selected for experimental or control group among geriatrics staying in N.L Karunai Illam at Chennimalai. Geriatrics with both genders and who were able to understand Tamil were included as study participants. Geriatrics with Asthma, Cardiac problems, Cataract and Orthostatic hypotension were excluded from the study. Instruments comprises of demographic variables like age, gender, education, duration of stay in old age home and frequency of visitors. The Pittsburgh sleep quality index (PSQI) was used to measure sleep quality. The component scores are summed to procedure a global score(Range of 0 -21). A global score >5 is considered to be suggestive of significant sleep disturbance. Based on the percentage of scores the level of sleep was graded in 3 categories such as poor, Average and good. The reliability of Pittsburgh sleep quality index was tested by applying test retest method and the tool was found to be reliable(r=0.70).

Prior to the collection of data, permission was obtained from NL Karunai illam, surampatty, Erode. The data was collected from 01/12/2014 to 15/12/2014. Pretest was done by using demographic variables, Pittsburgh sleep quality index scale. Walking exercise was given twice a day for the period of 2 weeks to the geriatric in experimental group, while control group received the treatment twice a day for 1 week. Posttest was conducted at the end of 2 and 1 week in experimental and control group respectively by using Pittsburgh sleep quality index scale. Descriptive, inferential and nonparametric statistical analytic method was used to analyze and interpret the data. The data were expressed as frequency, percentage distribution, mean + SE. Paired‘t’ test was used for estimating the effectiveness of walking exercise in experimental group. Unpaired‘t’ test was used to compare the effectiveness of walking exercise between experimental and control group.

RESULTS

Distribution of experimental and control group samples according to their age group depicts, that highest (40% and 55%) of them were in the age group of 70- 80 years, however (30% and 55%) were under the age group of 60-70years and the least (30% and 20%) of them in the age group of above 80 years (Fig 1). With regard to gender, experimental and control group samples revealed that, the highest (75% and 55%) of geriatrics were females in both the groups; however least (25% and 45%) were male geriatrics in experimental group and control group (Fig 2). It seems that female have sleep disturbances more than males respectively.

Distribution of experimental group according to the frequency of visitors showed that frequencies of visit once in a month had highest (50%) when compared to twice in a month (25%) and thrice in a month (25%). However the highest (40%) of them in control group had frequency of visit once in a month, (30%) thrice and above, 20% twice in a month and 10% of them had visitors none in a month respectively (Fig 3). Distribution of experimental group participants

according to the duration of stay in old age home showed the highest (60% and 45%) of them were in 4-6 yrs, however (15% and 20%) were below 3years, and (25% and 35%) were above 7 years respectively (Fig 4).

Frequency and percentage distribution of experimental group pretest and posttest scores of sleep among geriatrics depicts that in pretest majority (75%) of geriatrics had poor sleep and (25%) of geriatrics had average sleep, whereas in posttest most (20%) of them were in good sleep, and 80% of geriatrics had average sleep. It seems that walking exercise on sleep among geriatrics was effective. Frequency and percentage distribution of control group pretest and posttest scores of sleep among geriatrics showed that in pretest majority (90%) had poor sleep and only 10% of geriatrics had average sleep whereas in posttest majority (85%) of geriatrics had average sleep (5%) of geriatrics had poor sleep and (5%) of geriatrics had good sleep. It seems that walking exercise intervention showed moderate changes in the sleep among geriatrics. Comparison of mean and SD of experimental group pre and posttest scores revealed that the mean of pretest was 16.8, whereas in posttest the score was 6.15. It depicted that the walking exercise was effective among geriatrics. Comparison of mean, standard deviation of control group pre and posttest scores showed that the pretest mean was 17.1 whereas posttest mean was 13.1. These findings depicted that walking exercise was less effective in improving sleep quality among geriatrics when compared to experimental group.

The Pared't' test value of experimental group was 11.30 at P<0.05 and it seems that there was significant effectiveness of walking exercise on sleep pattern among geriatrics. The Pared't' test value of control group was 27.98 at P<0.05 and it seems that there was significant effectiveness of walking exercise on sleep among geriatrics. The unpared't' value was 5.75 in experimental group and 7.86 in control group at P<0.05. This result demonstrated that experimental group showed more statistical significant effectiveness of walking exercise on sleep pattern compared to control group among geriatrics. Non parametric test chi square revealed that there was significant association between the posttest scores of experimental and control group with age at P<0.05. There was no significant association between the posttest scores of experimental and control group with gender, frequency of visitors, duration of stay in old age home at P>0.05.

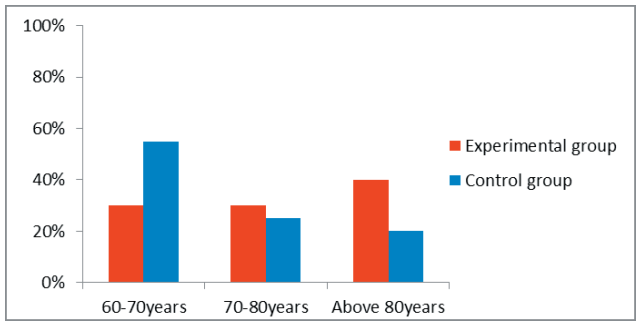


Fig: 1 Bar diagram shows the percentage distribution of geriatrics according to their age

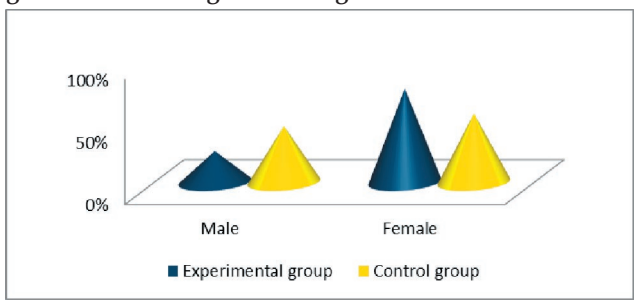


Fig: 2 Cone diagram shows the percentage distribution of geriatrics according to their gender

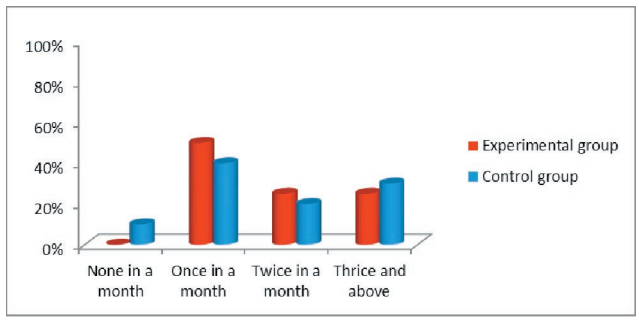


Fig: 3 Bar diagram shows the percentage distribution of geriatrics according to the frequency of visitors

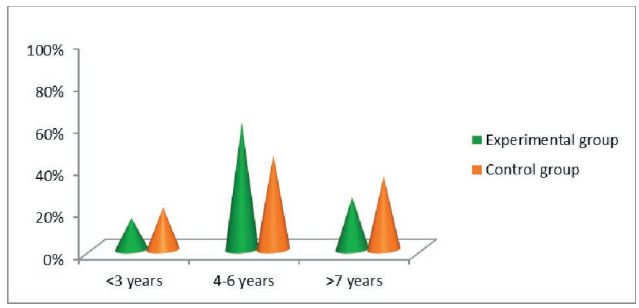


Fig: 4 Cone diagram shows the percentage distribution of geriatrics according to the duration of stay in old age home.

DISCUSSION

Chronic sleep disturbance is reported by nearly 50% of the elderly population. Increased levels of structured social and physical activity have positive

effects on sleep and performance in older adults. In addition, participation in a regular exercise program can also have positive effects on sleep quality, mood, and cognitive abilities. A meta-analysis of 12 studies indicates that regular exercise increases total sleep time and, in some studies, slow wave sleep (SWS). In addition, epidemiological data based on self reports consistently support the view that acute and chronic exercise promotes sleep. Furthermore data suggest that higher levels of physical activity in older adults are protective against incident and chronic insomnia.

Researcher at the standard university school of medicine studied how exercise effects sleep pattern of people aged 55-75 who were not physically active and had insomnia. Moderate exercise was performed for 20-30 minutes every other day in the afternoon. The outcome of exercising was that day fell asleep 50% faster and slept nearly one hour longer and very impressive. To overcome insomnia, it's probably best to exercise in the late afternoon or early evening [17]. The present study findings revealed that experimental group showed more statistical significant effectiveness of walking exercise on sleep pattern compared to control group among geriatrics.

It is further recommended that a large scale study can be carried out to generalize the findings. A similar study can be undertaken to compare the effectiveness of walking exercise with other exercise like yoga, meditation, deep breathing exercise. Similar study can be carried out to identify the effectiveness of walking exercise on other physiological variables. A longer period of intervention can be studied for more reliability and its effectiveness. Exercises can indeed improve sleep in older adults. In fact, the effect of walking exercise on sleep may actually be magnified for older adults since their sleep quality may not be optimal to start. Vigorous intensity activities not required.

Acknowledgment: The author expresses hearty gratitude for the exuberant guidance and support rendered by Prof. Mrs. Padmavathi, Dhanvantri College of Nursing, Pallakkapalayam and also appreciates the obligation by the N.L Karunai Illam at Chennimalai.

Conflict-of-Interest Statement : Conflict of interest does not exist with the author, author's institution or with financial relationships.

Statement of Informed Consent: Prior to the pilot study written informed consent was obtained from the subjects. Funding source was not obtained for the manuscript writing.

Statement of Human Rights: The data collection methods followed was in accordance with the ethical standards of the responsible committee on human experimentation.

REFERENCES

1. Akerstedt T (2007). Work hours, sleepiness and the underlying mechanisms. Journal of sleep Research, 15-22.
2. Angela Gentili, (2014). Geriatric Sleep Disorder. Medscape.
3. Ayranci, U, and N.Ozdag, (2009) Old age and its Related problems considered from an Elderly Perspective in a Group of Turkish Elderly, 303-304.
4. Barry, H. C., & Eathrone, S. W. (1994). Exercise and aging: Issues for the practitioner. Medical Clinics of North America, 78, 357-373.
5. Barry, H. C., Rich, B. S. E., & Carlson, R. T. (1993). How exercise can benefit older patients: A Practical approach. The Physician and Sports medicine, 21, 124-140.
6. Blair, T and Minkler, M. (2009), 'Participatory Action Research with Older Adults: Key principles In Practice' In the Gerontologist, 651-662.
7. Buysse DJ, (1989) The Pittsburgh Sleep Quality Index: a new instrument for psychiatric practice and research. Journal of Psychiatric Research: 193-213.
8. Byerley, W.F. (1990). The diagnosis and management of insomnia, New England journal of Medicine, 239-248.
9. Clarkson-Smith and A. A. Hartley, (1989) "Relationships between physical exercise and Cognitive Abilities in older adults," Psychology and Aging, vol. 4, no. 2, pp. 183– 189, 1989
10. Elia, E. A. (1991). Exercise and the elderly. Clinics in Sports Medicine, 10, 141-155
11. Foley DJ, (2006) Sleep Complaints among

elderly persons: an epidemiologic study of three Communities. Sleep, 425-432.

12. German AM et al. (2007), Effect of late life insomnia: Preliminary findings. Journal of Clinical Sleep Medicine, 407-408.
13. Hauri, P. J. (1983). A cluster analysis of insomnia. Sleep, 326-338.
14. Hawkins, A. F. Kramer, and D. Capaldi, (1992) "Aging, exercise, and attention," Psychology and Aging, vol. 7, no. 4, pp. 643–653. in Exercise and Its Mediating Effects on Cognition pp. 146–165, Human
15. Jana R. Cooke, (2011) Normal and Abnormal Sleep in the Elderly. Hand b Clin Neurol; 98: 653–665.
16. Janelle Martel, (2008). Sleep Disorders in the Elderly. Health line.
17. Kathryn J. Reid, (2010). Aerobic exercise improves self-reported sleep and quality of life in older adults with insomnia. Sleep Med. 11(9): 934–940. Kinetics, Champaign, Ill, USA.
18. Kronholm, E and Hyyppa, M.T. (1985). Age related habits and retirement. Journals of Clinical Research, 257-264.
19. Lopez.M, "Exercise and sleep quality," in Exercise and Its Mediating Effects on Cognition, pp. 131–146, Human Kinetics, Champaign, Ill, USA.
20. Manojan, A and Foley, D. (1996). Incidence of chronic insomnia associated with medical and Psychological factors: an epidemiologic study among older persons. Sleep research, 25,108.
21. McPherson, B. D. (1994). Sociological perspectives on aging and physical activity. Journal of Aging and Physical Activity, 2, 329-353.
22. Mitler MM, (1994). Sleep medicine, public policy and public health, Principles and practice of Sleep medicine, 453-462.
23. Morin, C. (1993). Dysfunctional beliefs and attitudes about sleep among older adults with and without insomnia complaints. Psychology and Aging, 463-467.
24. Morin, C. M. (1994). Nonpharmacological interventions for insomnia: A meta- Analysis of Treatment efficacy. American journal of psychiatry, 1172-1180.
25. Oha yon MM (2008), Meta analysis and of quantitative sleep parameters from childhood to old Age in healthy individuals: Developing normative sleep values across the human life Span. Sleep 1255-1260.
26. Renaud, L. Bherer, and F. Maquestiaux, (2010) "A high level of physical fitness is associated with more Efficient response preparation in older adults," Journals of Gerontology B, vol. 65, no. 3, pp. 317–322.
27. Reuter-Lorenz and D. C. Park, (2010) "Human neuroscience and the aging mind: a new look at Old problems," Journals of Gerontology B, vol. 65, no. 4, pp. 405–415.
28. Shephard, R. J. (1993). Exercise and aging: Extending independence in older adults. Geriatrics, 48, 61-64.
29. Spirduso.WW, (1975) "Reaction and movement time as a function of age and physical activity Level,"Journals of Gerontology, vol. 30, no. 4, pp. 435–440.
30. Vitiello.M.V, (2008) "Exercise, sleep, and cognition: interactions in aging," in Exercise and Its Mediating Effects on Cognition pp. 146–165, Human Kinetics, Champaign, Ill, USA,

DOI Number: 10.5958/0974-9357.2016.00107.0

Professional Socialization Models in Nursing

Joselin Mariet

Principal, Koyili College of Nursing, Kannur, Kerala

ABSTRACT

The ultimate goal of nursing education is to teach a student to think and act like a nurse, to see the health care industry through the lens of nursing and to respond to the effects of both educational and clinical experiences by developing professionalism. This process of internalization and development of an occupational identity is known as 'professional socialization'. It begins during student period and continues as they practice in the 'real world'. How does a student make the transition from a novice struggling to understand what is going on, to a person who thinks and feels like a nurse? Many nurse scholars and leaders in the past had explored and analyzed this concept and developed conceptual models to explain professional socialization of nursing students. This article is a review of the various conceptual models on professional socialization, published in nursing literature.

Keywords: *Professional socialization, nursing.*

INTRODUCTION

Since the time of Florence Nightingale, each generation of nurses, in their own way, has fostered the movement to professionalize the image of nurses and nursing. The struggle to change the status of nurses from that of female domestic servants to one of high-level health-care providers who base their protocols on scientific principles has been a primary goal of nursing's leaders for many years. Yet some people, both inside and outside of the profession of nursing, question whether the search for and attainment of professional status is worth the effort and price that must ultimately be paid. The development of an occupational and professional identity occurs initially through education and is extended in the work setting.[1]

Professional Socialization: Meaning and Definition

All students are in a process of transition, whether just beginning nursing education or returning to school as registered nurses seeking post basic degrees. Although the attitudes and behaviors that characterize professional nurses cannot all be learned from a book, the complex process of perspective transformation begins during formal schooling. Embedded in the idea of socialization to professional nursing are two concepts: professionalism and socialization.[2]

Definition: The process by which students internalize or take in new knowledge, skills, attitudes, behaviors, values and ethical standards and make these a part of their professional identity, is known as professional socialization. In other words, "Professional socialization is the process of internalization and development or modification of an occupational identity. Professional socialization in nursing is simply absorbing the culture of nursing, that is, the rites, rituals and valued behaviors of this profession"(Chitty,KK). The goal of professional socialization is development of professionalism[2,3]

Types of Socialization

- Formal socialization
- Informal socialization

In nursing, 'formal socialization' include lessons the faculty intends to teach for eg: how to plan nursing care, write a paper on nursing ethics, do the physical examination of healthy child etc. 'Informal socialization' includes lessons that occur incidentally, such as unplanned observations of a nurse teaching the young mother how to care for her pre-mature baby, participating in a student nurse association, hearing other nurses discussing about patient care concerns, etc. In nursing informal socialization experiences are more powerful and memorable than

formal socialization. This requires that students spend enough time with nurses in work settings for getting adequate exposure, for the nursing culture to occur.[2]

Factors influencing socialization

As students progress through nursing programs, a variety of factors challenge their customary ways of thinking[2]. These include:-

- Personal feelings and beliefs (eg: if a student has strong religious belief she may be uncomfortable working with patients who have no belief in God)
- Values and beliefs of family members
- Educational preparation of the student: Learning any new role creates some degree of anxiety, disappointment and frustration sometimes occur when student's learning expectations come into contact with educational realities. They sometimes become disillusioned when they observe nurses behaving in ways that are in contrast to their ideas about how nurses should behave.
- Presence / absence of role models in profession
- Type of Nursing Program

CONCEPTUAL MODELS OF PROFESSIONAL SOCIALIZATION IN NURSING

During the 1970s and 1980s, a number of models of professional socialization of basic and RN students were developed:-

- Cohen (1981) described developmental model appropriate for beginning nursing students.
- Hinshaw – Davis Model of Basic student Socialization
- Bandura (1977) described a type of socialization he called 'modeling ', which is useful when learning new behavior.
- Benner (1984) identified five stages nurses pass through in the transition from "novice to expert".
- Throwe and Fought (1987) described a developmental model of professional socialization of RN students.
- An explanatory model of professional socialization in nursing by Edens Geraldine, E. (1987)

1. Cohen's Model of Basic student Socialization

Cohen (1981), based on her work on developmental theories and studies of basic students attitude towards nursing developed a model of professional socialization consisting of four stages.(Table:1). She asserted "students must experience each stage in sequence to feel comfortable in the professional role". She believed that a positive outcome in all four stages is necessary for satisfactory socialization to occur. Although this model is interesting and potentially useful; it has not been subjected to rigorous testing or validated.[2,3]

Table:1 Cohen's Model- stages

	Stage	Key behaviors
I	Unilateral dependence	Reliant on external authority; limited questioning or critical analysis.
II	Negativity / independence	Cognitive rebellion (begin to question authority figures); diminished reliance on external authority; rely more on their own judgment.
III	Dependence / mutuality	Reasoned appraisal of other's ideas; begins integration of facts and opinions following objective testing; more impartial; they accept some ideas and reject others.
IV	Interdependence	Collaborative decision making; commitment to professional role; self-concept now includes professional role identity.

2. Hinshaw – Davis Model of Basic student Socialization

Hinshaw, a nurse, based her model on work done 10 years earlier by Davis, a sociologist who described his findings in the classic paper "Professional Socialization as Subjective Experience: The Process

of Doctrinal Conversion Among Student Nurses"(1966).[2,4.] Based on the classical doctrinal conversion model, Hinshaw's model is marked by six stages and corresponding behaviors of nurses are identified (Table:2).

Table:2 Hinshaw- Davis Model- stages

	Stage	Key Behaviors
I	Initial innocence	Idealized images and expectations of nursing, unaffected by reality.
II	Incongruities	Realize that their initial innocent images of nursing differ from the real structure and challenges of a nursing program; causes dissonance (lack of harmony) between reality and expectation; questions career choices; may drop out.
III	Identification	Select and carefully observe role models in clinical setting (admired instructors or senior nurses)
IV	Role simulation	Practice role behaviors they have observed; may feel unnatural in role (eg: therapeutic communication may feel awkward and obvious when first tried out)
V	Vacillation	Old images emerges and conflict with new professional image (eg: new graduates feel guilty when they are unable to provide intense, individualized care for every patient because of patient load and time restrictions
VI	Internalization	Stable and reliable use of the internalized professional model; acceptance and comfort with new role.

3. Bandura's Concept of Modeling

Bandura (1977), a social psychologist explained that professional socialization happens through 'modeling'. In modeling students learn by observing role models.[5]

Two requirements for successful modeling:

- Competent models
- Opportunity for students to practice the behaviors they see modeled.

Steps:

1. Students identify nurses or instructors who share their values and attitudes and observe them closely.
2. 'Try out' the behaviors they most admire

Bandura's concept of modeling is different from informal socialization, because modeling involves a 'Conscious decision' on the part of the learners to model themselves after the selected model. This is an important distinction. The basis of modeling as a method of professional socialization is careful observation and intentional simulation of the admired behaviors or characteristics. This is legitimate method of acquiring desirable professional behaviors that can be useful to both basic and RN students interested in being more active in their own socialization. [5]

4. Benner's Stages of Nursing Proficiency (Basic Student Socialization)

Patricia Benner, a nurse, wondered how nurses made the transition from inexpert beginners to highly expert practitioners. She described a process of five stages of nursing practice (Table:3), on which she based her 1984 book 'From Novice to Expert'. In 2000, many years after generated this model, Benner's work was one of several theories presented to a group attempting to demonstrate how learning theories apply to adult skill acquisition. They tested and confirmed that Benner's model was valid, and they suggested that her stages apply to any adult learning situation.[2,3]

Table3: Benner's stages of nursing proficiency

	Stage	Nurse Behavior
I	Novice	Has little background and limited practical skills; relies on rules and expectations of others for direction.
II	Advanced beginner	Has marginally competent skills, uses theory and principles much of the time, experiences difficulty establishing priorities.
III	Competent practitioner	Feels competent, organized; plans and set goals; thinks abstractly and analytically; co-ordinates several tasks simultaneously.
IV	Proficient practitioner	Views patients holistically; recognizes subtle changes; sets priorities with case; focuses on longterm goals.
V	Expert practitioner	Performs fluidly; grasps patient needs automatically; responses are integrated expertise comes naturally.

5. Throwe and Fought's Model for socialization of RN students

When registered nurses return to school for their post-basic degrees, their needs are different from those of basic nursing students. They may experience feelings of frustration and anxiety in returning to the student role. Often these nurses have practiced for years and wonder what anyone can teach them about nursing. Some may even feel insulated when they are placed in classes with students who are just beginning in nursing education. Actually, these RNs are not being socialized into nursing; they are in the process of "resocialization", a process that often creates uncomfortable tension. Throwe and Fought (1987) developed a conceptual model of RN socialization.[6] They believed that the stages registered nurses must master during re- socialization could be assessed using human development theory of Erikson(Table: 4).

Table 4: Throwe and Fought's Model-stages

	Developmental Task	Role-resisting behaviors	Role-accepting behaviors
1	Trust Vs. Mistrust: Learns to trust the world of education and work	Physically isolated from peers in class and clinical; respond only if called	Involved with classmates; initiate discussions with others
2	Autonomy Vs Doubt: Begins to develop independence while under supervision	Does not meet target dates for completion of assignments; does not contribute equally in group activities	Shares information with group, meet target dates, begins to develop independence with guidance.
3	Initiative Vs guilt: Can independently identify, plan, and implement skills and assignments	Perceive that objectives and assignments are not worthwhile; waits for instructor to initiate priority setting	Takes initiative in resolving conflict situations; is aware of and use available resources
4	Industry Vs Inferiority: Behavior is dominated by performance of tasks and curiosity	Needs direct encouragement from others; late, uninterested and resistant to learning opportunities	Able to reward self; confidence thrives; eager to try out new skills. Volunteers to demonstrate new behavior.
5	Identity Vs Role confusion: Individual searches for continuity and structure; is concerned with acceptance by others	See old job as ideal and denies need for change; frustrated with nursing as a career choice; too ideological and overly critical about others.	Searches for continuity and structure, but can adapt to unstructured clinical settings; identifies role models in clinical setting; realistic about progress in educational system.
6	Intimacy Vs Isolation: Seeks to combine identity with other self selected individuals	Does not participate in professional meetings; feels no increased esteem in performing new role behaviors	Volunteers leadership in study / work groups, participate in professional organizations, in self esteem.

6. An explanatory model of professional socialization in nursing by Edens Geraldine, E. (1987)

"An explanatory model of professional socialization in nursing" by Edens Geraldine E (1987) was adapted for the present study. Ms. Eden GE, RN, Phd has developed an explanatory model on professional socialization in nursing based on her extensive review of 42 published nursing studies on professional socialization, between 1955 and 1985. She has reviewed studies appeared in Nursing Research (66.7%), other nursing journals (14.2) and non-nursing journals (19.1%). Ms. Edens first presented the model in the Annual Research in Nursing Education Conference, held in San Francisco USA, in January 1987and it is published in online database ERIC (Educational Research information Centre).[7]

Edens explains that there are five interacting domains of potential professional self growth, which can be defined as the domains and outcomes of the professional socialization process. She explains that professional socialization is a learning process that takes place in a social environment of which the learner is an integral part. The five interrelated domains of professional socialization as given in the model are:-

- Self image
- Role conception
- Attitudes
- Values
- Personality

Negative outcomes of inadequate/improper socialization to Nursing profession

Serious negative outcomes result from inadequate socialization in nursing profession.[8] These include:-

- Reality shock
- Drop out
- Burn out
- Staff turnover
- Decreased productivity

Actively participating in one's own professional socialization

Professional socialization may sound like something that 'happens to' students. Although much is out of their control, students can become active participants to influence their socialization process.

Davidhizar, Gigen and Reed (1993), recommended certain strategies for nursing students to decrease the stress they experience in school and to improve their socialization, which include the following[2]:-

- Actively involve yourself in the learning process. Keep your eye on the prize. You are temporarily uncomfortable but will soon get something you want like promotion, career growth, personal growth, etc.
- Set aside preconceived ideas, prejudices and habits.
- Keep your perspective; you are not forced by anybody to the nursing school, it is your choice.
- Be receptive to feedback, even if it is critical. If you were perfect, you would not need to be here.
- Develop your time management skills; learn to use every bit of your time.
- Open up your creative side, your abstract thinking and willingness to engage in hypothetical thinking. Everything need not be immediately applicable in the work setting.
- Use faculty members as recourses. They want to be helpful, but cannot read your mind.
- Get a mentor for emotional support, like another nurse, relative or a faculty member.

Role of nurse educators in promoting professional socialization in their students

Students expect a lot from their nursing programs in terms of professional socialization. Schools are responsible for some activities, where as the individual is responsible for some others. Following is a guideline for faculty members to promote professional socialization in their students [8,9,10]:-

- Teachers should be interested in student's learning.
- Tolerate ideas of students that are different from your own.
- Emphasize in teaching knowledge and techniques of nursing, as well as values, ethics and social behaviors of nursing profession.
- Provide regular, direct and constructive feedback on the performance of your students.

- Explain the program's objectives and philosophy to the students.
- Take pride in the school where you are working and actively work to improve the standards of it.
- Model healthy personal behaviors
- Show respect to colleagues and to nurses working in the clinical setting.
- Respect your students and avoid authoritarianism ("big me/little you")
- Accept students who have the potential to succeed.
- Help students to cope with anxiety.
- Encourage students to participate in extracurricular activities available in the school and in SNA activities.
- Avoid partiality / favoritism to students.
- Keep on top of new developments in nursing and health care and convey it to your students.
- Value teaching as much as you value your own academic interests.
- View your student as a consumer of educational services.
- Provide rich clinical exposure and opportunities to the students.
- Model professional behavior and project positive nursing image in campus and in community.
- Be active in professional nursing organizations and let your student know it.

-The end-

Acknowledgement: I acknowledge the guidance given by Dr. Kochuthresiamma Thomas, Emeritus Scientist & Rtd Principal, Govt. College of Nursing, Trivandrum, Kerala and Dr. Sai Laxmi Gandhi, Asst. Professor in Nursing, NIMHANS, Bagalore in preparing the matter of this article.

Ethical Clearance: Not Applicable

Source of Funding: Self

Conflict of Interest: None

REFERENCES

1. Catalano JT, Nursing now! Today's issues , tomorrows trends, New Delhi: Jaypee Brothers, 2007.Pp 3-18
2. Chitty KK & Black BP, Professional nursing-concepts and challenges, St.Louis: Elsevier Saunders, 2007. Pp 126-45.
3. Leddy S & Pepper JM, Conceptual basis of professional nursing, Philadelphia : Lippincott,1998. Pp 46-64.
4. Creasia JL & Parker B, Conceptual foundations of professional nursing practice, St. louis: Mosby, 1996.
5. Cherry B& Jacob SR, Contemporary nursing-issues, trends and management, Philadelphia: Elsevier, 2005.
6. Chaska NL, The nursing profession- turning points, St.Louis: C.V Mosby co, 1990.
7. Edens GE, An exploratory model of professional socialization in nursing. www.Eric.ed.gov
8. Crigger N& Godfrey N, The making of nurse professional, London: Jones& Bartlett, 2011.
9. Ellis JR & Hartley CS, Nursing in today's world; challenges, issues and trends, Philadelphia: Lippincott,2001.
10. Mc Closky J & Grace HK, Current issues in nursing, St.Louis: Mosby, 2005.

DOI Number: 10.5958/0974-9357.2016.00108.2

Risk Factors for Morbidity in Pediatric Liver Transplantation at AIMS, Kochi

P Chitra[1], Prini Varghese[2]

[1]Professor, [2]M Sc Nursing Student, Department of Child Health Nursing, Amrita College of Nursing, AIMS, Kochi-41, Kerala. Amrita Vishwavidyapeetham University

ABSTRACT

Introduction: Liver Transplantation (LT) revolutionized the management of liver disease. LT has been very successful in treating children with end stage liver disease, and offers the opportunity for long healthy life. Rejection and infection are important adverse events after Pediatric Liver Transplantation (PLT). The objectives of the study are to identify the risk factors for morbidity in the LT children .

Method & Tools: A descriptive single centered study explored during 2006-2015, total number of children underwent LT was 50. The electronic Medical Records (eMR) were used with the permission of administrative authority and ethical approval from thesis review committee at AIMS. The data which includes socio demographic, specific donor characteristics, clinical profile of liver transplantation recipients, assumed risk factors were scrutinized in preoperative and post-transplant recipients .

Results: Out of 50 LT children, 36(72%) are survivors and 14(28%) were died in which 19(38%) were males and 31(62%) were females of ages ranging from 6 months to 17 years. The primary diagnosis noticed for the LT was Biliary atresia, Fulminant hepatic failure, Wilson's disease, Cirrhosis of liver respectively. The pre and post-transplant nutritional status of the children were very poor. Of all transplants 48(96%) were Living- related liver transplantation and 2(4%) were whole liver transplantation in which 29(58%) grafts were left lobe. For 39(78%) children donors were mothers. Bacterial infections were most frequent 41(82%) followed by viral 16(32%) and fungal 3 (6%). Among 50, 18(36%) of LT children has pleural effusion, typically on the right side, 12(24%) had bile leakage and 8(16%) had acute rejection.

Conclusion: Liver failure due to rejection was the major cause of death after LT. The risks for mortality and morbidity after LT is a multifactorial problem and all factors to be listed and need attention to give each to reduce this risk of better outcome.

Keywords- *LT- Liver Transplantation, PLT- Pediatric Liver Transplantation.eMR- electronic Medical Record. PELD-Pediatric End stage Liver Disease, MELD- Model for End stage Liver Disease.*

INTRODUCTION

Liver is the largest gland in the human body and one of the most complex of all human organs. It serves as the body's main chemical factory and is one of its major store houses of food. Its chief functions are to help the body digest and use food and to help purify the blood of wastes and poisons.[1]Liver failure occurs when large parts of the liver become damaged beyond repair and the liver is no longer able to function. It is the inability of the liver to perform its normal synthetic and metabolic function as part of normal physiology and a life threatening condition that demands urgent medical care. According to World Health Organization data published in May 2014, liver disease deaths in India reached 2, 16,865

Corresponding author
P Chitra,
Professor, Amrita College of Nursing, Amrita Institute of Medical Sciences, Ponekkara, Kochi-682041
Email id- prof.pchitra@gmail.com
AMRITA Vishwa Vidya Peetham University

or 2.44% of total deaths. The age adjusted death rate is 21.96 per 1, 00,000 of population ranks 61 in the world.[2]

Liver Transplantation (LT) revolutionized the management of liver disease. LT is indicated for most causes of acute or chronic liver disease[3]. LT has been very successful in treating children with end stage liver disease, and offers the opportunity for long healthy life. Thomas Earl Starzl, perform the first human liver transplant in 1963, on a 2 year old child affected by biliary atresia, the patient died in the operating room of uncontrolled hemorrhage.[4] the first successful human LT done in 1967. In India, the first successful PLT was performed in 1998 in an 18 month old male child with biliary atresia. The child's father became the first living related donor in India.[5] Since then many centers have established successful programs. First LT in the state of Kerala was performed at AIMS, Cochin in the year 2004. R W Shephered et al conducted a study with 2291 patients enrolled in the Studies of Pediatric Liver Transplantation (SPLIT) in which univariate and multivariate analyses were performed to find out the risk factors for rejection and infection in PLT. Rejection and infection are important adverse events after PLT. Advances in immunosuppression have been concentrated on preventing rejection, and indeed the use of such agents has led to a decreased rate of acute cellular rejection and graft loss from rejection. One challenge for managing children after LT is to balance this risk[6]. Ivan R Diamond et al conducted a study in which data were available on 2192 transplant recipients [1183 whole -LT, 261 split-LT, 388 reduced-size LT and 360 living –related LT(The transplant operations)] Graft type is an independent predictor of graft loss (death and retransplantation) in a multivariate analysis. Split and reduced grafts had a worse outcome when compared with whole organ recipients[7]. Infection in the immediate postoperative period of PLT is related with a high morbidity than mortality[8]. The volume of blood loss, post-operative cytomegalovirus antigenemia positivity and body weight were associated with the development of blood stream infection after LT in pediatric living donor recipients[9].

METHOD & TOOLS

According to eMR of all children undergone LT from 2006-2015 were used to analyze risk factors for morbidity.

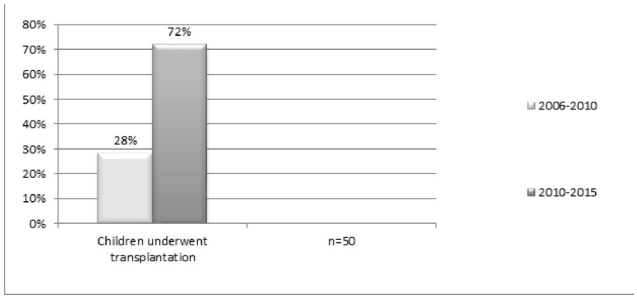


Figure-1 Distribution of children underwent liver transplantation based on years of transplantation

The socio demographic data which includes the age, gender religion and the year of transplantation. Clinical variables noted were primary diagnosis, chief complaints, co-morbidity, nutritional status, graft, donor, ABO blood type, child- Pugh class, PELD-for children less than 12 years and the MELD-for children more than 12 years. Donor characteristics which includes donor's age, co-morbidity in donor, living or deceased donor and the quality of liver graft. Liver transplantation recipient profile which includes type of LT, graft to recipient weight ratio (GRWR%), an hepatic time, warm ischemia time, cold ischemic time , type of biliary drainage, operative time, operative blood loss, number of intraoperative packed red blood cell transfusion, re-transplantation, re-exploration, type and level of immunosuppression. Preoperative recipient factors which includes prolonged preoperative ICU stay, bacterial, viral and fungal infections. Post-transplant recipient factors which includes intensive care stay with ventilation and complications after LT and the causes of death after PLT.

RESULTS

Objective- Identify the risk factors of morbidity in LT children

The study findings show that out of 50 LT children, 36 are survivors and 14 were expired in which 19(38%) were males and 31(62%)were females. The age of the children underwent LT ranging from 6 months to 17 years.

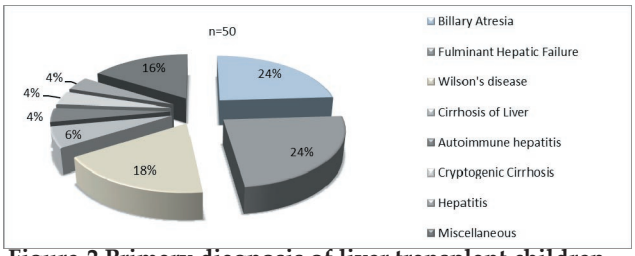


Figure-2 Primary diagnosis of liver transplant children

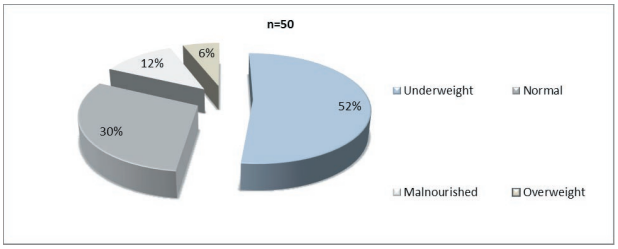


Figure-3 Distribution of Subjects according to their nutritional status

The study reveals that of all transplants 48(96%) were Living related liver transplantation and 2(4%) were whole liver transplantation in which 29(58%) grafts were left lobe, 14(28%) were right lobe and 6(12%) were left lateral lobe. There was only one ABO incompatible donor-recipient pair. Multiple donors and recipient factors impact graft survival after LT[10]. For 39(78%) children mothers donated their liver and for 5(10%) of their fathers, for 4(8%) grandmothers and 1(2%) donor was brother. Out of 48(96%) living donor, three donors had co-morbidities like small portal vein, reactive airway disease and dyslipidemia. The quality of the liver graft was good in 47(94%) donors, 3(6%) had marginal liver (fatty liver).

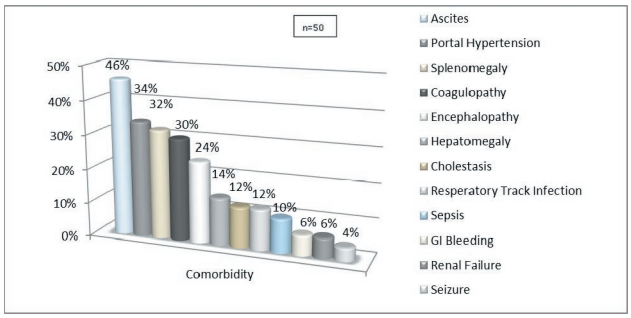


Figure-4 Distribution of Subjects on the basis of co-morbidities .

The study also reveals that among 50 children, 39(78%) of them had infection. Bacterial infections are most frequent 41(82%), following viral 16(32%) and fungal 3 (6%)

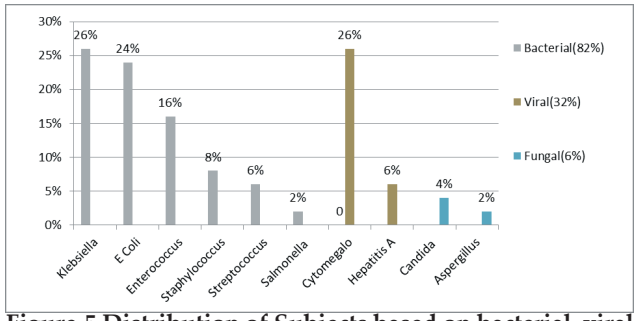


Figure-5 Distribution of Subjects based on bacterial, viral and fungal infections.

The study results identifies that the total drain output was 200-300ml/day in 46(92%) children and >200 -300ml/day in 4(8%). Among 50 children, 18(36%) had pleural effusion- typically on the right side, this data supported the findings reported by Uenis Tannuri et al[11]. Biliary complications include bile leakage 12(24%); intrahepatic stricture in 4(8%) and anastomotic stricture in 1(2%). Then acute rejection was another major complication which was present in 8(16%).

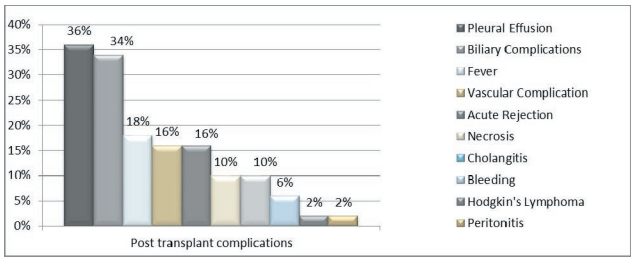


Figure-6 Distribution of Subjects According to Post Transplant Complications

DISCUSSION

On analyzing the study findings, the risk factors for Morbidity are the severity of the primary diagnosis's, chief complaints like icterus or jaundice, fever, yellowish discoloration (urine, sclera) with pale stools, abdominal distension, pedal edema, vomiting, disorientation and pallor, then the severity of co-morbidities present in the children

The present study findings explored the infections caused by bacterial were Klebsella, E coli, Enterococcus faecalis, Salmonella typhi, streptococcus and staphylococcus, viral infections Cytomegalo virus, hepatitis A virus and fungal caused by Candida albicans and aspergillus. This findings were supported by the following study findings conducted by various investigators. Infectious complications are major causes of morbidity and mortality after LT ([12, 22]). Similar

results were found by Hoek et al[13]. A pretransplant evaluation like complete history taking (family history, previous infections and immunizations) and physical examination is helpful in the management of infectious complications. Infants are more prone to infection. The poor nutritional status influence both morbidity and mortality. Pretransplantation nutritional intervention and decrease in operational blood loss would help prevent post-transplantation infectious complications.[14] Biliary complications after transplantation remain a serious cause of morbidity and mortality[15]. The presence of biliary complications, particularly biliary leak increases the length of stay and hospital costs[16].

Among 14 children the present study findings of the major cause of death in seven children were Liver failure, due to hepatic artery thrombosis, primary non function, severe rejection and portal vein thrombosis. Chronic rejection is major cause of graft failure and frequent reason for re-transplantation after PLT. Some had multiple complications along with liver failure like massive intracerebral and brain stem hemorrhage, tacrolimus toxicity, neurologic complications, hypoglycemia and cardiac failure. The infection or sepsis was due to single organism in some children and in others due to multiple organisms (i.e. mixed bacterial, viral or fungal). Among 14 children, 3 of them were died because of infection and other three were suffered with severe infection and died with Liver and other organ failure. The cause of death recorded for three children were Deep coma, post-operative brain death and lymphoproliferative disease. The following studies were investigated to detect the causes of PLT by D L Sudan et al, Gupta et al and Delawir et al[17,18,19]

The child-Pugh score consists of five clinical features: total bilirubin level, serum albumin, prothrombin time (INR), the degree of ascites and the grade of hepatic encephalopathy and is used to assess the prognosis of chronic liver disease and cirrhosis determining the patient's child-Pugh class (class A-100% one year survival, class B- 80% one year survival and class C- 45% one year survival). The score is used with the PELD/MELD score to determine priority for LT[20]. The PELD/MELD score quantifies the risk of death within 3 months, higher the score, the higher the mortality. The child –Pugh score class (especially C), duration of the an hepatic time, more warm ischemic time, longer cold ischemia time, urgent transplantations, donor age, GRWR% and intraoperative blood loss proved to be risk factors for graft loss, similar results were reported by Egbert Sieders et al[21]. ABO blood type Incompatibility, more ICU stay with ventilation, operative time, operative blood loss, number of intraoperative packed red blood cell transfusion, re-transplantation, re-exploration, type and level of immunosuppressant's, donors quality of liver graft (fatty liver), donor's age and co-morbidity and complications after LT affect the survival rates. Mettu Srinivas et al in their study described that donor age greater than 40 years is considered a risk factor with grafts from donors elder than 70 years having a 65% increased risk of allograft failure. Liver grafts from elderly donors are fattier, with an element of fibrotic change. Their liver may not tolerate long periods of cold ischemia[22].

Immunosuppressive drugs used to prevent rejection inhibit activation of T lymphocytes, medullar cell proliferation and macrophagic function, therefore creating an optimal environment for the development of infections. Doses are adjusted in order to maintain trough concentrations within a recommended target range. Tacrolimus has not been associated with cosmetic adverse effects such as hypertrichosis and gingival hyperplasia observed in cyclosporine-immunosuppressed children. Moreover, tacrolimus is associated with less hyperlipidemia and lower adverse cardiovascular risk profile than cyclosporine[4]. Mycophenolate Mofetil has fewer myelotoxic and hepatotoxic side effects and when used in combination with TAC and steroids, the dose of TAC required is usually lowered. In our study Immune suppression was given as per the protocol (Tacrolimus, mycophenolate sodium and prednisolone) and the dose was titrated according to the level in the blood and liver function test. Non adherence to medications is a leading cause of morbidity in children who had a transplant[23].

CONCLUSION

The study findings are drawn to the conclusion that Living Donor LT (LDLT) is performed with high rate of success due to judicious recipient and donor selection, careful preoperative planning, excellent anesthesia management and early detection and prompt treatment of complications. Careful

monitoring and management of infections is crucial for improving the outcome of LDLT in children. Proper nutritional status maintenance is needed to improve short term outcome after LT. Appropriate matching based on donor-organ-recipient variables can improve outcomes and decrease graft rejection. The risk for mortality and morbidity after LT is a multifactorial problem and all factors need attention to minimize the risk and prevent further graft loss and lead to even better results.

Conflict of Interest: Nil

Source of Funding: Self-finance

Acknowledgment Br. Saibala, MSc. N, Nursing Director, Amrita Institute of Medical Sciences, Who is supported to get Ethical and Administrative approval to proceed this study.

REFERENCES

1. The World Book Encyclopedia. L-Volume 12, World book, Inc,a Scott Fetzer company , United States of America,1999, p_{p-}393-394
2. World health organization, India liver disease.www.world life expectancy.com
3. Tram T Tran, Nicholas N Nissan, F Fred Poordad, Paul Martin. Advances in LT; new strategies and current care expand access, enhance survival. Post graduate Medicine (Impact factor: 1.7) 06/ 2004; 115(5):73-6, 79, 85.
4. MarcoSpada, Silvia Riva, Giuseppe Maggiore, Davide Cintorino and Bruno Gridelli. Pediatric liver transplantation, World J Gastroenterol.2009 Feb 14;15(6):648-674.doi:10.3748/wjg.15.648
5. Anupam Sibal, Vidyut Bhatia and Subash Gupta, Fifteen years of liver transplantation in India, Indian pediatr 2013;50:999-1000
6. RW Shepherd,Y Turmelle, M.Nadler, J.A.Lowell, M.R.Narkewicz, S.V.Mc Diarmid, et al. Risk Factors for Rejection and Infection IN Pediatric liver Transplantation, Am J Transplant.2008Feb ;8(2).doi:10.1111/j.1600-6143.2007.02068.x.
7. Ivan R.Diamond, Annie Fecteau, J Michael, Julian E, Vickey Ng, Ravinder Anand, et al .Impact of graft type on outcome in pediatric liver transplantation. Ann Surg.2007 Aug; 246(2): 301-310. Doi: 10.1097/ SLA. 0b013e3180caa415
8. Garcia S, Roque J, Ruza F, Gonzalez M, Madero R, Alvarado F. Infection and associated risk factors in the immediate postoperative period of PLT. Clin Transplant.1998 Jun;12(3):190-7
9. Shoji, Funaki, Kasahara, Sakamoto, Seisuke, Fukuda et al. Risk factors for blood stream infection after living-donor LT in children.Pediatric infectious disease journal: October 2015 –volume 34-issue 10-P 1063-1068.doi: 10.1097/INF.0000000000000811.
10. Mettu Srinivas Reddy, Joy Varghese, Jayanthi Venkataraman and Mohamed Rela. Matching donor to recipient in liver transplantation: Relevance in clinical practice. World J Hepatol.2013 Nov 27;5(11):603-611.doi:10.4254/ wjh.v5.i11.603
11. Uenis Tannuri and Ana Cristina Aoun Tannuri, Postoperative care in pediatric liver transpla ntation,Clinics.2014 Jan;69(suppl 1):42-46.doi: 10.6061/clinics/2014(supol)08
12. Sang II Kim ,Bacterial infection after liver transplantation, World J Gastroenterol.2014 May 28 ;20(20): 6211-6220.doi: 10.3748/ wjg.v20.i20.6211
13. Hoek B, de Rooij B J, Verspaget HW. Risk factors for infection after liver transplantation, Best Practice and Research Clin Gastroenterol.2012 Feb; 26(1):61-72.doi Van:10.1016/ j.bpg.2012.01.004.
14. Kaido,Toshimi, Mori, Akira, Ogura, Yasuhiro et al. Pre and perioperative factors affecting infection after living donor liver transplantation, Elsevier Inc, Nutrition, Nov-12:1104-1108.doi: 10.1016/j.nut.2012.02.007
15. Rossano Girometti, Lorenzo Cereser, Giuseppe Como, Chiara Zuiani, Massimo Bazzocchi. Biliary complications after orthotopic liver transplantation: MRCP findings, Sep 2008,volume33,Issue 5,pp 542-554
16. Flavia H Feier, Eduardo A da Fonseca, Joao Seda-Neto and Paulo Chapchap. Biliary complication after pediatric liver transplantation: Risk factors, diagnosis and management. World j Hepatol.2015Aug 28;7(18):2162-2170.doi: 10.4254/wjh.v7.i18.2162
17. D L sudan, B W Shaw.Jr and AN Langnas. Causes of late mortality in pediatric liver transplant

recipients.Ann Surg.1998 Feb;227(2):289-295

18. Gupta .p, Hart J et al, Risk factors for chronic rejection after pediatric liver transplantation ,2001,sep27;72(6);1098-102
19. Delawir Khan, Carlos O.Esquivel, Leonard Makowka, Manuel Madringal -Torres, Eduardo Yunis, Shunzahure Iwatsukl et al. Causes of death after liver transplantation in children treated with cyclosporine and steroids. Clin Transplant.1989; 3:150-155.
20. Asthana S ,M C Clan P, Stringer M D, Does the pediatric end stage liver disease score or hepatic artery resistance index predict outcome after liver transplantation for biliary atresia, Pediatr surg Int.2006 Sep;22(9):697-700.Epub 2006 Aug 1
21. Egbert Sieders, Paul M.J.G.Peeters, Elisabeth M.TenVergert, Koert P.de Jong, Robert J. Porte, Jan H Zwaveling, etal. Graft loss after pediatric liver transplantation. Ann Surg.2002 Jan;235(1): 125-132.
22. Hanaa A El-Araby,Enas M Ghonein,Azza Abd Elaziz and Tarak M Ibrahim,Early infections after living Donor liver transplantation in Egyptian children. Egyptian Journal of medical microbiology, April 2010,vol.19,No.2
23. Shemesh, Shneider BL, Savitzky JK, Arnott L, Gondolesi GE, Krieger NR et al. Medication Adherence in Pediatric and Adolescent Liver transplant recipients Pediatric, 2004 Apr; 113(4): 825-32.

DOI Number: 10.5958/0974-9357.2016.00109.4

Effectiveness of Kegal Exercise on Women with Urinary Incontinence

Preeti Bali[1], Gomathi Mahalingam[2], Kanchan Bala[3]

[1]Nursing Tutor, LLRM Medical College, Meerut, Uttarakhand, India, [2]Assistant Professor, [3]Senior Nursing Tutor, Himalayan College of Nursing, SRHU, Dehradun, Uttarakhand, India

ABSTRACT

Background: Pelvic floor muscles support the womb, the bladder and the bowels. Many factors are weakens the pelvic floor muscles in females which can cause urinary incontinence. Kegal exercises are simple clench-and-release exercises that helps to make the muscles of pelvic floor more stronger.

Material and method: A Quantitative experimental design was used to study the effectiveness of kegal exercise on women with urinary incontinence. Seventy women with urinary incontinence were selected from Doiwala. Samples were selected by using non probability, purposive sampling technique and randomly divided into two groups i.e. Experimental group (n=34) and Control group (n=35). Urogenital questionnaire and incontinence questionnaire were used for data collection. Intervention was given to the experimental group i.e. kegal exercise for 4 weeks (3 cycles, (1 cycle consist 5 time) 3 times a day). The post-test was conducted after 4 weeks.

Results: After 4 weeks of kegal exercise, urogenital distress score was reduced from 1.7 ± 0.65 to 1.0 ± 0.42 and incontinence impact score from 1.6 ± 0.63 to 1.1 ± 0.40 in the experimental group ($p<0.05$). In the control group, no significant decline was observed at the level of < 0.05.

Conclusions: Thus it concludes that kegal exercise was effective in reducing the urogenital distress and incontinence impact level among women. The present result suggested that kegal exercise help to rehabilitate the muscles of the pelvic floor and beneficial impact on urinary incontinence.

Keywords: *Urinary incontinence, Urogenital distress, Incontinence impact, kegal exercise.*

INTRODUCTION

Since it affects about one third of adult women, urinary incontinence is one of the greatest problem that affect women's quality of life. The international Continence Society defines urinary incontinence as: the condition in which the involuntary loss of urine is a social and demonstrable problem[1], not only it cause anxiety and embarrassment, but it also affects the sufferer's confidence and self respect.[2]

Approximately, 50 million people worldwide suffer from urinary incontinence where in women to men ratio is 2:1[3] and an estimated of 41% - 57% of older women above 40 years of age in the US suffer from this disabling condition[4]. In a survey done in Asia, the prevalence of urinary incontinence in India was 12%[5].

Kegel exercise help to rehabilitate the muscles of the pelvic floor. The exercises involve the conscious contraction and relaxation of the pubococcygeus muscle, with the goal of increasing the resting tension of the sphincter components in this region. Motivated patients who follow a rigid exercise regimen for up to 3 months typically experience beneficial effects. The best results are achieved with the use of verbal instructions, along with supervision by trained clinical professionals[6].

The investigator purpose to select the study was to determine the effectiveness of kegal exercise on women with urinary incontinence.

Objective: The objectives of the study was: (1) To assess the level of urinary incontinence among

women. (2) To determine the effectiveness of kegal exercise by comparing the urinary incontinence level of experimental and control group. (3) To find association of pre interventional urinary incontinence of women in experimental & control group with their selected demographic variables.

MATERIALS & METHOD

The Quantitative True Experimental design adopted for the present study. Non probability purposive sampling technique was used for the selection of 70 women those who fulfilled the inclusion criteria of the study and randomly assigned into two groups (experimental (35) and control group (35)). Women with other chronic medical disorders, and neurological disorder were excluded. Urogenital distress and incontinence impact questionnaire were used to measure the urinary incontinence. Women were explained the procedure and purpose of the study & written informed consent was taken. Pre interventional data was collected by completing a questionnaire related to baseline characteristics. Urinary incontinence level was assessed by using urogenital distress and incontinence impact questionnaire. Intervention was given to the experimental group i.e. kegal exercise for 4 weeks (3 cycles, (1 cycle consist 5 time) 3 times a day). The subjects were requested to perform the exercise at home regularly. Their performance was controlled from time to time by the researcher in home visit for exercise performance. Participants in control group were requested not to take part in any regular exercise programme up to the end of the study.

One participants from experimental group were drop out due to personnel problem. After 4 weeks of intervention post data was collected. Descriptive statistics including mean, standard deviation, frequency and percentage were used for describing the results. The independent t test and paired t test were used to analyze for study findings before and following exercise programme. Final analysis was done on 69 samples (experiment= 34, control= 35).

RESULTS

Table-1: Frequency and percentage distribution of selected personal variables of study participants n=69

S.NO	Characteristics	Experimental group n=34		Control group n=35		p value
		f	%	F	%	
1.	**Age**					
	35-50 years	11	32.4	8	22.9	
	51-65 years	14	41.2	19	54.2	
	66->80 years	9	26.4	8	22.9	0.63
2.	**Age at marriage**					
	15-18 years	14	41.2	19	54.3	
	19-22 years	20	58.8	16	45.7	0.28
3.	**Educational status**					
	No formal education	6	17.6	10	28.6	
	Primary	10	29.4	12	34.3	
	Secondary	18	52.0	13	37.1	0.15
4.	**Occupation**					
	Daily wages	1	2.9	0	0	
	Housewife	25	73.6	32	91.4	
	Private employee	8	23.5	3	8.6	0.20
5.	**Previous exposure to Kegal exercise**					
	Yes	0	0	0	0	
	No	34	100	35	100	____

Cont... Table-1: Frequency and percentage distribution of selected personal variables of study participants n=69

6.	**Age at first birth** 16-20 year 21-25 year	 17 17	 50 50	 25 10	 71.4 28.6	0.07
7.	**No. of gravid** 2 3->3	 1 33	 2.9 97.1	 2 33	 5.7 94.3	0.57
8.	**No. of baby Delivered** 2 3->3	 6 28	 17.6 82.4	 2 33	 5.7 94.3	0.12
9.	**History of Abortion** Yes No	 10 24	 29.4 70.6	 2 33	 5.7 94.3	0.009
10.	**No. of abortion** 1-2 Not applicable	 10 24	 29.4 70.6	 2 33	 5.7 94.3	0.009
11.	**No. of children** 2 3->3	 7 27	 20.6 79.4	 2 33	 5.7 94.3	0.06
12.	**Type of delivery** Normal LSCS Instrumental	 32 1 1	 94.2 2.9 2.9	 35 0 0	 100 0 0	0.17
13.	**Undergone Episiotomy** Yes No	 6 28	 17.6 82.4	 4 31	 11.4 88.6	0.47
14.	**Interval between Delivery** 1 year 2 year	 17 17	 50 50	 22 13	 62.9 37.1	0.28
15.	**Delivered Big baby** Yes No	 18 16	 52.9 47.1	 29 6	 82.9 17.1	0.007
16.	**If yes, weight** 3-4 kg >4 kg Not applicable	 13 5 16	 38.2 14.7 47.1	 23 6 6	 65.8 17.1 17.1	0.006
17.	**Place of delivery** Government hospital Private Home delivery by trained dais Home delivery by untrained dais	 3 5 22 4	 8.8 14.7 64.7 11.8	 0 4 19 12	 0 11.4 54.3 34.3	0.01
18.	**History of UTI** Yes No	 22 12	 64.7 35.3	 23 12	 65.7 34.3	0.93
19.	**History of genital organ Prolapsed** Yes No	 8 26	 23.5 76.5	 14 21	 40 60	0.14
20.	**History of spinal Anaesthesia** Yes No	 10 24	 29.4 70.6	 7 28	 20 80	0.37

Table no. 1 shows the frequency and percentage wise distribution of demographic variables of women. Homogeneity of the samples was tested by computing independent 't' test. The p values is significant at $p<0.05$ level and the data revealed that experimental & control group were homogenous in relation to their most of the demographic characteristics.

Table-2:- Level of urinary incontinence in women before intervention (n=69)

S.N	Characteristics	Mean ± SD	Remarks
1.	Distress	1.5 ± 0.86	Moderate
2.	Impact	1.7 ± 0.64	Moderate

Table no. 2 shows that overall urogenital distress mean score was 1.5 ± 0.86 and incontinence impact mean score was 1.7 ± 0.64. All women had moderate level of urinary incontinence.

Table-3: Effectiveness of kegal exercise by Comparing pre interventional Distress & post interventional distress level of urinary incontinence within the group (n=69)

SN	Group	Pre distress	Post distress	MD	T value	P value
1.	Experimental n=(34)	1.7 ± 0.65	1.0 ± 0.42	0.71	7.5	0.001
2.	Control n=(35)	1.5 ± 0.90	1.9 ± 0.85	0.44	1.8	0.09

Paired t test, $df_{67}= 2$, $p<0.05$

Table No. 3. shows that the pre interventional distress level in experimental group was (1.7 ± 0.65) more than the post interventional distress level (1.0 ± 0.42). And mean post interventional urinary incontinence of women in experimental group was significantly lower than the mean urinary incontinence level of women in control group. Hence, it revealed that the kegal exercise was effective to decrease the urinary incontinence distress level.

Table-4: Effectiveness of kegal exercise by Comparing urinary incontinence level of pre interventional & post interventional impact level of urinary incontinence within the group (n=69)

SN	Group	Pre impact	Post impact	MD	T value	P value
1.	Experimental n=34	1.6 ± 0.63	1.1 ± 0.40	0.5	6.7	.001
2.	Control n=35	1.7 ± 0.68	1.9 ± 0.75	0.2	4.6	.002

Paired t test, $df_{67}= 2$, $p<0.05$

Table No. 4 shows that pre interventional impact level in experimental group was (1.6 ± 0.63) more than the post interventional impact level (1.1 ± 0.40). Mean post interventional urinary incontinence level of women in experimental group was significantly lower than mean urinary incontinence level of women in control group. Hence research hypothesis accepted. It shows the effectiveness of kegal exercise.

Table-5: Association between the pre interventional urinary incontinence distress of women with their selected demographic variables in experimental & control group. (n=69)

S.N	Demographic characteristic	Pre interventional distress			p value
		Below median (<17)	Above median (≥17)	Chi square	
1.	**Age** 35-50 year 51-65 year 66->80 year	 12 20 7	 7 13 10	2.9	0.40
2.	**Age at marriage** 15-18 year 19-22 year	 13 26	 20 10	7.5	0.006
3.	**Age of first birth** 16-20 year 21-25 year	 18 21	 24 6	8.1	0.004
4.	**Education** No formal education Primary Secondary	 4 11 24	 12 11 7	---------	0.001
5.	**Occupation** Daily wages Housewife Private employee	 0 33 6	 1 24 5	-------	0.72
6.	**No. of delivery** 2 3->3	 7 32	 1 29	----------	0.12
7.	**Type of delivery** Normal LSCS Instrumental	 38 1 0	 29 0 1	----------	0.6
8.	**History of genital organ prolapsed** Yes No	 7 32	 15 15	8.02	0.005
9.	**History of spinal anaesthesia** Yes No	 12 27	 5 25	1.8	0.17

Table no. 5 shows the statistical association between pre interventional urinary incontinence distress score with selected demographic variables in both groups. It revealed that age at marriage, age of first birth, education, history of genital organ prolapse were statistically associated with pre interventional distress level.

Table-6: Association between the pre interventional urinary incontinence impact of women with their selected demographic variables in experimental & control group. (n=69)

S.N	Demographic characteristic	Pre interventional Impact		Chi square	p value
		Below median (<15)	Above median (≥15)		
1.	Age 35-50 year 51-65 year 66->80 year	 11 19 10	 8 14 7	1.5	0.67
2.	**Age at marriage** 15-18 year 19-22 year	 15 25	 18 11	4.06	0.04
3.	**Age of first birth** 16-20 year 21-25 year	 21 19	 21 8	2.7	0.09
4.	**Education** No formal education Primary Secondary	 7 10 23	 9 12 8	6.9	0.07
5.	**Occupation** Daily wages Housewife Private employee	 0 34 6	 1 23 5	--------	0.61
6.	**No. of delivery** 2 3->3	 6 34	 2 27	--------	0.45
7.	**Type of delivery** Normal LSCS Instrumental	 39 1 0	 28 0 1	--------	0.66
8.	**History of genital organ prolapsed** Yes No	 10 30	 12 17	2.07	0.15
9.	**History of spinal anaesthesia** Yes No	 13 27	 4 25	--------	0.09

Table no.6 shows the statistical association between pre interventional urinary incontinence impact score with selected demographic variables in both groups. It revealed that age at marriage was statistically associated

with pre interventional distress level.

DISCUSSION

In this study half of the participants in experimental group (41.2%) and in control group (54.2%) were in the age group of 51-65 years. Diane F Borello et al[8] also stated in her study that women were in the age group between 38-70 years.

In present study findings shows that women were having moderate level of urinary incontinence and it was supported by Vidhya seshan[7] stated that 78.2% women had moderate level of urinary incontinence.

The present study shows the urinary incontinence impact and distress level of experimental group was significantly lower than the control group. Similar study conducted by Jahromi MK[16] stated that before the pelvic muscle exercise, there was no difference between two groups (p = 0.7). But after the pelvic muscle exercise there was a significant statistical difference (p = 0.001) was observed in both groups and also stated that pelvic muscle exercise improved the self-esteem of participants with urinary incontinence in experimental group (p<0.001).

Results of Sangsawang B[14] et al showed the similar findings that the pelvic floor muscle strength improved after the pelvic muscle exercise. Heena abhatt[17] stated in her study that women participants who had stress urinary incontinence treated with Tanzberger Exercises had improved pelvic floor muscle strength and improved quality of life.

The study conducted by Santacreu M and Ballesteros RF[18] revealed that urge, stress, and mixed UI can be significantly reduced by completing a standard intervention program consisting of Kegal exercises.

In present study, a significant association was found between pre interventional urinary with age at marriage. The study conducted by Sangsawang B[14] et al and Locher JL[15] et al. reported a significant association between preinterventional urinary incontinence distress score with selected demographic variables.

CONCLUSION

Hence this can be concluded that using the kegal exercise with urinary incontinence problem was helpful to decrease the urinary incontinence distress and impact level, this findings of the study will help the nursing professionals working in hospital and community areas to educate the women about kegal exercise.

Acknowledgement – Nil

Ethical Clearance – Taken from Swami Rama Himalayan University, Dehradun.

Source of Funding – Self

Conflict of Interest - Nil

REFERENCES

1. Resnick B, Keilman L, Calabrese B, Parmelee P, Lawhorne L, Pailet J, et al. Nursing staff beliefs and expectations about continence care in nursing homes. Journal of wound, ostomy, and continence Nursing. 2006; 33 (6): 610-8.
2. Contillo C. Hospital extra: urinary incontinence and depression. American Journal of Nursing 2007; 107 (1): 72C – 72 H.
3. Kocak I, Okyay P, Dundar M. Female urinary incontinence in the West of Turkey: Prevalence, risk factors and impact on quality of life.European Urology. 2005; 48: 634-6.
4. Huang AJ, Brown JS, Kanaya AM. Quality- of-life impact and treatment of urinary incontinence in ethnically diverse older women. Arch Intern Med. 2006; 166.
5. Diokno AC. Incidence and prevalence of stress urinary incontinence. Advanced Studies in Medicine. 2003; 3(8E): S824-S828.
6. Maagd GAD, Davenport TC, Management of Urinary Incontinence, a peer reviewed journal for managed care and hospital for mulary management. 2012; 37(6): P. 345-361. Available from www.ncbi.nlm.nih.gov/pmc/articles/PMC3411204
7. Seshan V, Muliira JK. A Self-reported urinary incontinence and factors associated with symptom severity in community dwelling adult women: implications for women's health promotion, BMC Womens Health. 2013; p 13-16, Available from www.biomedcentral.com, doi: 1 0.1186/, PMC

8. France DFB, Downey PA, Zyczynski HM, Rause CR. Continence and Quality-of-Life Outcomes 6 Months Following an Intensive Pelvic-Floor Muscle Exercise Program for Female Stress Urinary Incontinence: A Randomized Trial Comparing Low- and High-Frequency Maintenance Exercise, physiotherapy. 2008; 88(12), p 1545-53, Available from www.ncbi.nlm.nih.gov/pubmed
9. Sharaf AY, Sebai NA, Ewieda SM, Shokry MS, Salem MA, The Impact of Nursing Interventions on the Control of Urinary Incontinence among Women in outpatient clinic at Alexander Main University Hospital, Journal of American science, 2010; 6(10): P. 1256-1271 Available From, http://www.jofamericanscience.org
10. Singh A, Agrawal P, Sachdev N. Incidence and epidemiology of urinary incontinence in women. The Journal of Obstetrics and Gynecology of India. 2007; 57 (2): P.155-57.
11. Bodhare TN. An epidemiological study of urinary incontinence and its impact on quality of life in two clusters. Indian Journal of Urology. 2010; 26(3): P. 353–58. Available from PMC doi: 10.4103/0970-1591.70566
12. Child S, Shuttleworth ABJ , Gericke C , Freeman R. Can primary care nurse administered pelvic floor muscle training (PFMT) be implemented for the prevention and treatment of urinary incontinence? A study protocol, US national library of medicine national institutes of health, 2013; P. 2-47, Available from www.ncbi.nlm.nih.gov/pubmed.
13. Huang AJ, Thom DH. Experimental study, on Urinary incontinence and pelvic floor dysfunction in Asian- American women. Am J Obstet Gynecol. 2006; 19(5): P. 1331–37.
14. Sangsawang B and Sangsawang N. An experimental study on Stress urinary incontinence in pregnant women: a review of prevalence, pathophysiology, and treatment, Int Urogynecol J (2013); 24: P. 901-912, available from DOI 10.1007/s00192-013-2061-7 pubmed
15. Locher JL, Burgio KL. An experimental study on Effects of Age and Causal Attribution to Aging on Health-Related Behaviors Associated With Urinary Incontinence in Older Women, Journal Gerontologist. 2002; 42(4). P. 515–21. Available from PMC
16. Jahromi MK, Talebizadeh M, Mirzaei M. The effect of pelvic muscle exercises on urinary incontinency and self-esteem of elderly females with stress urinary incontinency. Glob J Health Sci. 2014; 7(2): 71-79. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25716389
17. Bhatt HA, Hande DN, Shinde N, Khatri S. Effect on Tanzberger Exercises in women with Stress Urinary Incontinence at Maharashtra. Int J of Health Sciences and Research (IJHSR). 2013; 3: P. 44-50. Available from: www.scopemed.org.
18. Santacreu M and Ballesteros RF. Evaluation of a behavioral treatment for female urinary incontinence. 2011; 6: 133-39. Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3131983/

DOI Number: 10.5958/0974-9357.2016.00110.0

Effectiveness of Music Therapy on Depressive Symptoms among Elderly in Selected Geriatric Homes

Gopi D[1], Preetha A K[2]

[1]*Vice Principal,* [2]*Lecturer, College of Nursing, Kannur Medical College, Anjarakandy PO, Kannur, Kerala*

ABSTRACT

A Quasi experimental approach was used for this study. Objectives are to assess the level of depressive symptoms, effectiveness of music therapy, association between the level of depressive symptoms of elderly with selected demographic variables. The study was carried out Clare Bhavan and Swandanam Geriatric homes at Kannur. The sample comprised of 30 elderly people. Sample was selected by using convenient sampling technique. A total of 30 elderly people with depressive symptoms selected for the study by using geriatric depression scale the selected samples were given pre test questionnaire the music therapy was administered to all group members for 30 minutes and instructed to continue this for a period of 15 days. Post-test using geriatric depression scale was conducted 15 days after the administration of music therapy . The result of the study shows that the post-test mean score 8.6667 (SD =1.64701) was less than the pre-test mean score 19 (SD = 2.49136) ,the obtained mean difference between pre test and post test score is 10.3333. the obtained t value is 23.062 so it is significant at 0.01 level. It was inferred that elderly people with depressive symptoms after music therapy had significant decrease in post-test score. Therefore, the music therapy was effective in reducing the depressive symptoms among elderly and also there was no significant association with the level of depressive symptoms and selected demographic variables.

Keywords: *Elderly, Music Therapy; Depressive symptoms.*

INTRODUCTION

"Youth is like a fresh flower in May Age is like a rainbow that follows the storms of life Each has its own beauty."- David polis

Every human being passes through the different phases of life. Old age is said to be final phase of the life. Ageing is a natural inevitable process, with increasing life expectancy at birth and availability of better medical care facilities. Old age population is increasing day by day. Health problems, particularly those associated with chronic illness increase with age, moreover the aged can cope up with physical changes, emotional changes are common in this common problem is depressive symptoms.[1]

Corresponding author:
Mr. Gopi D M.Sc.(N), Ph.D.,
Vice Principal, College of Nursing, Kannur Medical College, Anjarakandy PO, Kannur, Kerala-670612

Elderly depressive symptom is a major public health problem. As the population grows, the number increases. The problem is further compounded because levels of depression are especially high in elderly individuals who are medically ill. Elderly clients who experience loneliness often feel, they no longer have a purpose in life and are at risk for the development of late life depression.[1]

India's older population is projected to quadruple by mid century, while that of the world is expected to triple, the US Census Bureau said. In its latest report, the Census Bureau said the world's 65-and-older population is projected to increase from 516 million in 2009 to 1.53 billion in 2050. Because women generally live longer than men, they account for slightly more than half of the older population and represent nearly two thirds of the 85 and older population.[2]

Music therapy is one of the mind and body relaxation techniques where a client listens to music

which affects his mood and feelings. Music is known to affect both the mood of the client as well as his physiological functions. Music has the power to access deep emotions. Music of choice has been a great healer. Healing is concerned with bringing the body into a natural state of balance. A blend of musical tones can lead to such a balance more easily. The aim is to restore, maintain and improve emotional, physical, physiological, and spiritual health well being.[3]

The World Health Organization (WHO) estimates that 121 million people worldwide suffering from depression. In an analysis of studies worldwide the average prevalence was 13.3% for all depression symptoms (Major and milder depression) with rate of major depression average 1.8% (Beckman.et.al.2004). About 1 in 8 women can expect to develop clinical depression during their lifetime.[4]

By 2020 WHO estimates that depression will be the second leading cause, thereby it increases the family burden and individual impairment. Recent studies say that music therapy can enliven the lives of elderly people who find it hard to cope up with the stress of modern day of living and end up depressed.[5]

Statement of the problem

A study to assess the effectiveness of music therapy on depressive symptoms among elderly in selected geriatric homes at Kannur .

Objectives

1. To assess the level of depressive symptoms among elderly.

2. To evaluate the effectiveness of music therapy on depressive symptoms among elderly.

3. To assess the association between the level of depressive symptoms of elderly with selected demographic variables.

Hypotheses

H_1: There will be significant difference between the level of depressive symptoms of elderly before and after music therapy.

H_2: There will be significant association between level of depressive symptoms of elderly and the selected demographic variables.

MATERIALS & METHOD

a) Research approach: Experimental approach.

b) Research design: One group pretest-posttest.

c) Sample size: 30 samples

d) Sampling technique: Purposive sampling technique

e) Tools: Demographic variables, Geriatric depression scale, Music therapy

f) Inclusion criteria

- Subjects who are willing to participate in this study
- Subjects who knows Malayalam
- Subjects who had a score above in 9 in geriatric depression scale.
- Both sexes in the age group between 65 and 75.

Exclusion criteria

- -Subjects who are on psychiatric treatment.
- -Clients who have chronic medical surgical condition.

FINDINGS

TABLE 1: Percentage and frequency distribution before and after music therapy. n=30

Level of depressive Symptoms	Pretest frequency Percentage	Posttest frequency Percentage
Normal	00	21
Mild	17	09
Moderate	13	00

Table 1 shows that the level of the depressive symptoms among elderly people in the pre test frequency percentage no one was suffering normal depressive symptoms, 17 number of persons were having mild depressive symptoms, and 13 number of persons were having moderate depressive symptoms, whereas post test frequency percentage 21 number of persons were having normal depressive symptoms, 9 number of persons having were mild depressive symptoms and no of them has moderate depressive symptoms.

TABLE 2: Pre test and post test mean score of sample before and after music therapy. n=30

Test	Depressive symptoms		't' value
	Mean	SD	
Pre test	19	2.49136	23.062**
Post test	8.6667	1.64701	
Mean difference	10.3333	2.45418	

** significant at 0.01 level

Table 2 shows that the mean value pre test is 19 and standard deviation is 2.49136, and the post test mean value is 8.6667 and standard deviation is 1.64701, and obtained t value is 23.062 it is significant at 0.01 level. Hence it is concluded that the significant change in the pre test and post test value, so it is indicated that music therapy is effective in the elderly people with depressive symptoms.

TABLE 3: Mean pre test and post test scores based on type of music interested. n=30

Group	N	Pretest		Post test		't'value
		Mean	SD	Mean	SD	
Old film songs	18	18.8333	2.63438	8.8333	1.88648	15.584**
New film songs	7	20	2.58199	8.2857	1.11270	14.496
Classical music	5	18.25	1.5	9	1.41421	37**

**significant at 0.01 level

Table 3 shows that the music interested the elderly people interested in the old film songs pre test mean value is 18.8333,standard deviation is 2.68438, whereas post test mean value is 8.8333, standard deviation is 1.88648, in the new film songs pre test mean value is 20, standard deviation is 2.58199, whereas post test mean value is 8.2857 standard deviation is 1.11270, in the classical music pre test mean value is 18.25, standard deviation is 1.5, whereas post test mean value is 9 standard deviation is 1.41421. Hence it is concluded that there is significant difference in the mean pre test and post test score so music therapy is effective.

CONCLUSION

Music therapy is one of the mind and body relaxation techniques where a client listens to music which affects his mood and feelings. Music is known to affect both the mood of the client as well as his physiological functions. Music has the power to access deep emotions. Music of choice has been a great healer. Healing is concerned with bringing the body into a natural state of balance. A blend of musical tones can lead to such a balance more easily. The aim is to restore, maintain and improve emotional, physical, physiological, and spiritual health well being. In this study the investigator selected 30 samples according to the inclusion and exclusion criteria and gave music therapy based on the raga mohanam according to the subjects interest. The tool used for this study is demographic variables and geriatric depression scale .post test conducted after 2 weeks and data were analyzed.

Music therapy was very effective on elderly people with depressive symptoms.

Conflicts of Interest: Nil

Source of Funding: Self

Ethical Clearance: Study was approved by College of Nursing research committee and ethical committee of Kannur Medical College. Permission sought from the concern authorities of the old age home before conducting the research.

REFERENCES

1. Dr.Tikitisha.B. Music to ears therapy to treat relieve stress in aged. JDN (internet). 2002 September; 15(6) available from: www.pubmed .central.nih.gov.
2. Aihara.Y. The relationship between past lifestyle, social support and depressive symptoms among community dwelling elderly people in japan. JCMH(internet)2010. may; 5(9) available from: www.pubmed.central.nih.gov.
3. Mahinder Kaur. The magic of music Indian journal of holistic nursing.AJP (internet) 2008 March;3(8). available from: www.pubmed.centr al.nih.gov..
4. Anna Marathos, Crawford.M. Efficacy of music therapy among people with depression. IJP (internet). 2009 January 23 available from : www .pubmed.central.nih.gov..
5. Hsu Sin Yi Chung .Elder's music preference, physiological response and the effect of familiarity on listening to classical music among taiwan elderly. AMTA (internet). 2009; available from: http://www.in.music therapy. abstracts.amta.

DOI Number: 10.5958/0974-9357.2016.00094.5

Evaluation of a Nursing Intervention for Pediculosis Human Capitis in Rural Female School Students and their Mothers in Thiruvallur District, India

Jiss Vargese[1], Aruna S[2], Vijayasamundeswari[2]

[1]Student (MSN), College of Nursing, [2]Reader (MSN)& Lecturer, Faculty of Nursing, Sri Ramachandra University, Porur, Chennai, Tamil Nadu, India

ABSTRACT

Background: An important setback among female students is head lice infestation. This leads to problems in all the aspects such as physical, mental and social. Among young children head lice is more prevailing problem due to more bodily contact with others and sharing of things. School students are not bringing to the notice of health care professionals due to shame, embarrassment. **Method:** Design used for the study was non randomized, pretest posttest control group design. The purpose of the study was to find out effectiveness of nursing intervention on knowledge and infestation. Tools were knowledge questionnaire and observation checklist and examination of head by magnifying glass. After the pretest nursing intervention was planned and executed for study group school children and their mothers (Education program and Neem oil application). The posttest was done on the 25th day. Vast statistically significant difference at $p<0.001$ level was found within the group and between the group among study group participants. In the control group it was not significant ($p>0.05$). **Conclusion**: This study imposes importance of nursing intervention at community level. The education program and Neem oil application had a positive impact on reduction of perdiculosis capitis among school children.

Keywords: *Pediculosis human capitis, knowledge, level of infestation, Neem oil application.*

INTRODUCTION

Pediculus humanu capitis is prevailing in the society for more than hundreds years. It is commonly occurring and neglected parasitic diseases among children, especially among female children(1,6). Literature reported that prevalence of pediculosis ranging from 9% to 60% in various parts of the world (2,3,4). In India it is most widespread problem among rural school children (5). Head lice infestation is neglected by health professionals, parents, children however it can be reduced by maintaining good personal hygiene and by creating awareness. The school environment has a positive impact in the wide spread of parasite due to the close physical contact of students, which provides a favorable condition for transmission of parasite. In precisely we can say that utmost it can lead to school absenteeism (9,4). Head lice infestation is not a very serious health issue, but can become a serious health problem if not treated properly. Head lice infestation will lead to less attention span among the school children as because of the continuous itching and discomfort. Iron defiency and subsequent anemia may occur due to heavy infestation and frequent feeding of the lice. Early identification and proper treatment is essential for prevention of head lice infestation.

Neem (azadirachia Indica) has been used as an insecticide, insect repellent, oral dentifrice, in traditional medicine for treating of skin infection. Neem oil has been widely used in traditional Indian medicine and they have been used as ingredients in various cosmetics. Neem oil is best natural and biodegradable (7) product for the treatment of head lice and nits. Neem oil contains azadirachin content, which prevent multiplication of head lice by disturbing their growth and development. Neem

oil effectively kills lice in all stages of their life. It is proved by laboratory tests that both mellantriol and salannin content of neem oil cease feeding of lice. The other properties in neem oil, also reduces speed of swallowing system of lice and other insects, thus hampering them from feeding (8). There were no documented data about unsafe use of home remedies except one study (10). Very few studies reported on knowledge and effect of safe traditional home remedies for head lice in Rural Indian setup. Hence the researcher decided to

- Evaluate the effectiveness of nursing intervention regarding pediculosis human capitis on knowledge and level of infestation among school children in the study group compared with control group.
- Identify the relationship between knowledge and level of infestation among school children.
- Find out the association between level of knowledge and infestation with the background variables among school children with pediculosis.

MATERIALS & METHOD

A. Design: The research design adopted for this study was a quasi experimental non randomized pretest posttest control group design. Two schools under the Rural Health and Training Centre of Sri Ramachandra Medical Centre & Research Institute (Chennai, India) at Vayalanallur were selected conveniently. The participants were explained about the nature of the study. The written informed consent was obtained from the participants. The study participants were explained about nursing intervention in Tamil (local language) separately and privately.

Complete survey was done from 18-7-14 to 25-7-14 in two schools by the investigator to get the list of children with pediculosis. There were 48 school children in the study school out of 108 (44%) and 56 school children in the control school out of 117(48%) identified to fulfilled inclusion criteria. The investigator selected randomly a sample of 30 school children from study school and 30 school children from control school by lottery method.

B. Method of data collection:

The tool consisted of three parts: part I: background variables. Part- II: pediculosis human capitis knowledge questionnaire. part-III: pediculosis human capitis observation checklist comprising of 10 signs and symptoms. Full head examination was done by investigator with magnifying glass. Both the knowledge questionnaire and the checklist were developed by the investigator. The content validity was obtained from the nursing experts. The reliability of the tool was assessed by the test retest method, the obtained correlation coefficient value was 0.8.

MANIPULATON

The intervention included laptop assisted teaching to the school children and their mothers on pediculosis human capitis and neem oil application for the school children. The teaching was imparted by the investigator through lecture, discussion and demonstration with laptop, chart and blackboard as group session for 40 minutes. A total of 6 groups with 5 school children in each group were grouped for teaching session. The content outline of the teaching were pediculosis human capitis- lifecycle, symptoms, method of transmission, diagnosis, treatment, prevention and control measures such as self hygiene, avoidance of close conduct and sharing of personal things. The mothers of school children were given laptop assisted teaching individually in the home setting and school children were educated and mothers were instructed to apply neem oil that was handed over to mothers by the investigator. Mothers were advised to apply 5 teaspoon of neem oil with 10teaspoon of warm coconut oil over the head of school children with pediculosis human capitis for 1 hour. Hair washing was done thoroughly after 1 hour followed by wet combing. This was continued for twice in a week for three weeks. The control group received routine care. The posttest was conducted on the 25th day of the intervention.

F .Data collection:

The data was collected from 18.07.14 to 19.07.14 (four weeks). The study was conducted in 4 phases that is survey and pretest on first four days of data collection, teaching and demonstration in the school setting, same teaching implemented to the mothers individually in the home setting and neemoil application to the children with pediculosis human capitis by their mothers in the home setting and the

posttest was conducted on the 25th day to identify the knowledge and level of infestation

STATISTICAL METHOD

The Descriptive statistics (frequency, mean standard deviation) were used to assess the demographic variables of both groups. Inferential statistics (chi-square, paired t-test, independent't' test, spearman correlation) were used to compare the effectiveness of nursing intervention within the group and between the group, associate the demographic variables with level of infestation and knowledge. A p value of <0.05 was considered significant.

RESULTS

Description of the population

Nearly half of them, 16 (53.3%) in the study group and 19 (63.3%) in the control group were in the age of 10-12yrs.With regard to mothers age, 21(70.0%) in the study group and 19(63.3%) in the control group were in the age group of 30-35 yrs. With regard to income, 17(56.7%) in the study group and 21(70.0%) in the control group were from low socio economic background. Regarding the type of house, 14(46.7%) in the study group and 12(40.0%) in the control group were living in the hut house.

With respect to frequency of hair wash, 16(53.3%) in the study group and 17(56.7%) in the control group had the habit of washing their hair once in a week. 10 (33.3%) in the study group and 6(20.0%) in the control group had hair wash twice a week. 4(13.3%) in the study group and 7(23.3%) in the control group had hair wash more than 3 times a week. The data regarding the length of hair 15(50.0%) in the study group 17(56.6%) in the control group had long hair (38cm). 15(50.0%) in the study group and 13(43.3%) in the control group (>38cm) had short hair.

Regarding the history of head lice in the family, 11(36.7%) in the study group and 14(46.7%) in the control group had head lice history among mothers. 15(50.0%) in the study group and 9(30.0%) in the control group had head lice history among siblings. 4(13.3%) in the study group and 7(23.3%) in the control group had a history of relatives. The data regarding the sharing of objects, 23(76.7%) in the study group and 19(63.3%) in the control group shared their comb. 2(6.7%) in the study group and 11(36.7%) in the control group had sharing of pillows. Regarding the sharing of bed, only one child in the study group and 3 children in the control group didn't share their bed with others. 29(96.7%) in the study group and 27(90.0%) in the control group had a history of sharing of bed. The chi square revealed the homogeneity between the study and the control groups with regard to all personal variables.

During pretest both in the study and control group nearly 40-60% had inadequate knowledge 36 to 42% had moderately adequate knowledge and only one had adequate knowledge. During post test in the study group 64% had moderately adequate knowledge 30 % had adequate knowledge and only two had inadequate knowledge. There is no change in the control group. The group had significant difference as shown by Chi-square value of 22.192 with p<0.01.This indicates the improvement in knowledge among children with pediculosis in the study group (Table1).

Regarding the mothers knowledge, during pretest 33.3% in the study group and 36.6% in the control group had inadequate knowledge, during posttest 10% in the study group and 57.6% in the control have inadequate knowledge (p<0.001).

With regard to the level of infestation, in the study group the mean score was 6.50 in the pretest and was decreased to 4.10 during posttest (p<0.01, Table 2)

DISCUSSION

Systematic review revels that the prevalence of pediculosis in the global level varied from 9 to 60%. In the present study prevalence of pediculosis in two rural areas were 44% and 48%. It is consistent with the study conducted in rural area of India5. Similarly study conducted during 2000 in Egypt 11 reported 54% and in 2003 it was 19.37%12. In this study 30 to 46% had history of head lice among mothers and half of them were from low income group. These findings were consistent with teo other study13,14. One study13reported that mothers having greater contribution towards pediculosis infection and other study14 stated that low socio economic status having higher impact.

The findings of the study evidenced that there was a significant difference between pre and post test values of knowledge and infestation. The mean difference score on knowledge overall in the study group between the pretest and posttest was 6.3±2.5 and in the control group it was 0.33±2.84 and paired value was 7.49 at the level of p<0.001. Hence it ensured a highly significant difference. The mean difference score on level of infestation in the study group between the pretest and posttest was 2.4±1.75 and in the control group was 0.70±1.48 and paired value was 7.49 at the level of p<0.001. Hence there was a highly statistical difference that existed between the study group and the control group in both aspects at the level of p<0.01 (Table2).

These findings were consistent with the study conducted during 201418 on evaluation of effectiveness of two methods of management of pediculosis capitis among children of selected schools of Udupi district, India. The management included perlice cream application and use of wet combing. The Z value of two methods of management was significant at p<0.05.

The analysis revealed that there was an association between knowledge and income of the family at the level of p<0.04 and history of head lice in family at the level of p<0.03. The study also reveals that there was an association between the infestation and type of family at the level of p<0.02 and type of house at the level of p<0.02.

Table 1 .Comparison of Level of knowledge among school children with pediculosis in the study group and the control group (N=60)

Level of knowledge	Study group (n=30)		Control group (n=30)		χ^2 & *p* value
	No.	%	No.	%	
Pretest					
Inadequate (1-49%)	13	43.4	18	60	1.732
Moderately adequate (50-74%)	16	42.4	11	36.6	0.42(NS)
Adequate (75-100%)	1	3.4	1	3.4	
Posttest					
Inadequate (1-49%)	2	3.4	17	57.6	22.192
Moderately adequate (50-74%)	19	64.4	12	40.6	.000***
Adequate (75-100%)	9	30.6	1	3.4	

NS - Non significant, ***p <0.001

Table 2. Comparison of mean difference scores of knowledge and infestation among school children with pediculosis between the study group and the control group (N=60)

Variables	Study group		Control group		Study group	Control group	Independent 't' & 'p' value
	pretest	posttest	pretest	posttest	MD	MD	
Overall Knowledge	7.5±1.79	13.8±1.98	6.8±2.15	7.13±2.28	6.3± 2.5	0.33±2.84	4.28 0.001**
General aspect	2.33±0.75	4.9±0.80	1.9±1.39	2.5± 1.22	2.5±1.27	0.63±1.67	2.43 0.018**
Signs and symptoms	2.70±1.08	4.4±1.07	3.3±0.76	2.8±0.84	1.7±1.54	0.23±1.27	2.73 0.008**
Management	2.46±1.04	4.4±1.35	1.86±1.13	1.8±1.15	1.9±1.62	0.06±1.61	2.46 0.017*
Infestation	6.50±0.90	4.10±1.24	4.6± 1.06	5.36±1.21	2.4±1.75	0.70±1.48	7.38 0.001**

CONCLUSION

Nurses have an important role of creating awareness about knowledge about pediculosis human capitis among school children. If the school children and their mothers getting proper guidance regarding pediculosis human capitis a signifiifcant impact can be made on their health that will be helpful in maintaining happy life. Head lice infestation can be prevented from early identification and treatment; hence the creating awareness will reduce the head lice infestation. The practice of using neem oil is also an effective and a feasible method to reduce the head lice infestation.

Acknowledgement: It is my privilege to be a part of the Sri Ramachandra University and I thank the Managing Trustee, for allowing me to utilize the resources available in the University.

Ethical Clearance- Taken from Sri Ramachandra Universty Student Ethics committee

Source of Funding - Self

Conflicts of Interest - There are no conflicts of interest.

REFERENCE

1. Sim S,Ja sLee W, Ran Yu J, Yong Lee I, Hyun Lee S, Youn Oh S, Seo M, and Yil Chai J.Risk Factors Associated with Head Louse Infestation in Korea. Korean J Parasitol. 2011 March; 49(1): 95–98.
2. Tatman-Otkun M, Gurcan S, Ozer B, Ertem A, Sakru N and Otkun M.The prevalence of Pediculus humanus capitis and Tinea capitis among elementary school students in Edirne. Trakya University Tip Fak Derg,2005, 22(2): 82-87.
3. Nutanson I, Steen CJ, Schwartz RA and Janniger CK. Pediculosis humanus capitis: an update. Acta Dermatovenerol Alp Pononica Adriat. 2008, 17 (4): 147-54,156-7, 159.
4. Center for Disease Prevention and Control (CDC) . Head Lice. Epidemiology and Risk factors. 2010. Available at http://www.cdc.gov/parasites/lice/head/epi.html
5. Archna Rashmi, Nayanci Bansal, Gaurav Arya and Aftab Ahmad. Prevalence of Pediculus humanus capitis in a school of low socio-economy area in Rampur (U.P), India. (2009), Journal of Applied and Natural Science 1(2): 284-285.
6. Pedro Magalhaes, Emili Figueired, Daniel Capingana (2010) Head lice among school children in Viana, Angola:Prevalance and revalant Teacher"s knowledge. Journal of Human Parasitic Diseases 3:11-18
7. Biswas, Kausik, Ishita Chattopadhyay, Ranajit K.Banerjee and Uday Bandyopadhyay. 2002. Biological activities and medicinal properties of Neem (Azadirachta indica). Current Science 82(11): 1336-1345.
8. Bargain marketing concepts.,(2007) Neem oil against head lice and nits. Retrived from http://genericlicetreatment.com//how to get rid of lice.
9. Ronald C. Hansen, MD . Overview: The State of Head Lice Management and Control . Am J Manag Care. 2004 Sep;10(9 Suppl):S260-3.
10. Magee.J. Unsafe practices in the treatment of pediculosis capitis. The Journal Of School Of Nursing 1996, Feb;12(1):17-20
11. Omar AA. Ringworm of the scalp in primary-school children in Alexandria: infection and carriage. East Mediter Health J. 2000;6:961-7.
12. Abdel-Hafez K, Abdel-Aty MA, Hofny ER. Prevalence of skin diseases in rural areas of Assiut Governorate, Upper Egypt. Int J Dermatol. 2003;42:887-92.
13. Akisu C, Aksoy U, Delibas SB, Ozkoc S, Sahin S. The prevalence of head lice infestation in school children in Izmir, Turkey. Pediatr Dermatol. 2005;22:372-3.
14. Ghada El-Khawaga, MD* , Farida Abdel-Wahab, MD** , Wessam Mohamed. Prevalence Of Pediculosis Capitis Among Primary female School Students In An Egyptian Village, The Egyptian Journal of Community Medicine Vol. 30 No. 4 October 2012
15. Morsy TA, el-Ela RG, Morsy AT, Nassar MM, Khalaf SA. Two contagious ectoparasites in orphanage children in Nasr City, Cairo. J Egypt Soc Parasitol. 2000;30:727-34.
16. El-Rifaie AA , Meabed MH and Mostafa OA. Epidemiology of scabies and Pediculosis capitis among primary school children in Beni Suef Governorate. Egypt J Med Sci. 2000; 21(1):187-195.
17. Stone P., Wilkinson-Herbots H., Isham V.. A stochastic model for head lice infections. Journal of Mathematical Biology. 2008;56:743–763.
18. Manjula, Suja Karkada, Anusuya, Asha Kamath, S. M. (2014). An evaluvative study to find the effectiveness of two methods of management of pediculosis capitis among children of selected schools of Udupi dist. Journal of Nursing and Health Science, 3(1), 17–20.

Call for Papers/ Article Submission

Article submission fee

- Please note that we charge manuscript handling charges for all publications.Charges can be enquired by sending mail.
- In cases of urgent publication required by author, he /she should write to editor for discretion.
- Fast tracking charges are applicable in urgent publication
- Please note that we charge only after article has been accepted for publication, not at the time of submission.
- Authors have right to withdraw article if they do not wish to pay the charges.

Article Submission Guidelines

Please submit paper in following format as far as applicable

1. Title
2. Names of authors
3. Your Affiliation (designations with college address)
4. Corresponding author- name, designations, address, E-mail id
5. Abstract with key words
6. Introduction or back ground
7. Material and Methods
8. Findings
9. Discussion / Conclusion
10. Acknowledgement
11. Conflict of Interest
12. Source of Support
13. References in Vancouver style.
14. Word limit 2500-3000 words, MSWORD Format, single file
15. Please quote references in text by superscripting.

Our Contact Info

Prof (Dr) R K Sharma

International Journal of Nursing Education

Institute of Medico-Legal Publications

4th Floor, Statesman House Building,

Barakhamba Road, Connaught Place, New Delhi-110001

Mob: 09971888542, Fax no.: +91 11 3044 6500

E-mail: editor.ijone@gmail.com, Website: www.ijone.org

International Journal of Nursing Education

CALL FOR SUBSCRIPTIONS

About the Journal

Print-ISSN: 0974-9349 **Electronic - ISSN:** 0974-9357, **Frequency:** Quarterly (Four issues in a year)

"International Journal of Nursing Education" is an international peer reviewed journal. It publishes articles related to nursing and midwifery. The purpose of the journal is to bring advancement in nursing education. The journal publishes articles related to specialities of nursing education, care and prctice. The journal has been assigned international standard serial numbers 0974-9349 (print) and 0974-9357 (electronic). The journal is covered by Index Copernicus, Poland and is included in many international databases.

Subscription Information

Journal Title	Pricing of Journals		
IJONE	Print Only	Print+Online	Online Only
Indian	Rs. 7000	Rs. 9000	Rs. 5500
Foreign	US $ 450	US $ 550	US $ 350

Note for Subscribers

Advance payment required by cheque/demand draft in the name of ' **Institute of Medico-legal Publications** ' payable at New Delhi.
Cancellation not allowed except for duplicate payment.
Claim must be made within six months from issue date.
A free copy can be forwarded on request.

SEND REMITTANCE TO:

Prof. R.K. Sharma, Editor

International Journal of Nursing Education

Institute of Medico-legal Publications

4th Floor, Statesman House Building,Barakhamba Road,
Connaught Place,New Delhi-110 001
Mobile:91-9971888542, Fax No: +91 11 3044 6500

E-mail: editor.ijone@gmail.com, Website: www.ijone.org

Published, Printed and Owned : Dr. R.K. Sharma
Printed : Saurabh Printers Pvt. Ltd., B-280, Okhla Indl. Area, Phase-I, New Delhi-110 020
Published at: Institute of Medico Legal Publications Pvt. Ltd. 4th Floor, Statesman House Building, Barakhamba Road, Connaught Place, New Delhi- 110 001
Editor : Dr. R.K. Sharma, Mobile: + 91 9971888542, Fax No: +91 11 3044 6500